

Current Awareness Service

Contents of Selected Journals

Vol. 5 No. 10

October 2015



Library & Documentation Centre
Central Marine Fisheries Research Institute
P.B.No.1603, Cochin - 682 018, Kerala

Contents of Selected Journals

October 2015



Library and Documentation Centre
CMFRI, Cochin - 18

Contents

Sl. No.	Title	Vol./No.	Mon./Yr	Page No.
1	Aquaculture	447	Oct '15	1-2
2	Aquaculture	448	Nov '15	3-6
3	Aquaculture Research	46 (9)	Sep '15	7
4	Aquaculture Research	46 (10)	Oct '15	8
5	California Fish and Game	101 (2)	Spring '15	9
6	California Fish and Game	101 (3)	Summer '15	10
7	Canadian J. of Agricultural Economics	63 (3)	Sep '15	11
8	Canadian J. of Fisheries and Aquatic Science	72 (7)	Jul '15	12-13
9	Fish and Fisheries	16 (3)	Sep '15	14
10	Fish Pathology	50 (2)	Jun '15	15
11	Fisheries	40 (8)	Aug '15	16-17
12	Fishing Chimes	35 (3)	Jun '15	18
13	Global Aquaculture Advocate	18 (5)	Sep-Oct '15	19
14	Journal of Crustacean Biology	35 (5)	Sep '15	20
15	Journal of Fish Biology	87 (3)	Sep '15	21-22
16	Journal of Fish Diseases	38 (10)	Oct '15	23
17	Journal of Marine Research	73 (1-2)	Jan-Mar '15	24
18	Journal of Shellfish Research	34 (2)	Aug '15	25-26
19	Journal of the World Aquaculture Society	46 (4)	Aug '15	27
20	Marine Ecology Progress Series	532	Jul '15	28-29
21	Molluscan Research	35 (3)	Aug '15	30
22	North American J. of Aquaculture	77 (3)	Jul '15	31

23	Statistical Science	30 (3)	Aug '15	32
24	Transactions of the American Fisheries Society	144 (4)	Jul '15	33

New Additions to Library

25	Periodicals			34-37
----	-------------	--	--	-------



Aquaculture

VOL. 447

CONTENTS

1 OCTOBER 2015

(Abstracts/contents list published in: *Aquatic Science and Fisheries Abstracts*, *Biological Abstracts*, *Elsevier BIOBASE/Current Awareness in Biological Sciences*, *Current Contents A, B & ES*, *EMBIology*, *Environment Abstracts*, *Freshwater and Aquaculture Contents Tables*, *Geo Abstracts*, *Geobase*, *Marine Science Contents Tables*, *Zoological Record*). Also covered in the abstract and citation database *Scopus®*.
Full text available in *ScienceDirect®*

Preface	1
B.A. Costa-Pierce (Biddeford, ME, USA)	
Aquaculture environment interactions: Past, present and likely future trends	2
P. Edwards (Pathumthani, Thailand)	
An Integrated ecological-economic modeling framework for the sustainable management of oyster farming	15
C.J. Byron (Biddeford, ME, United States), D. Jin (Woods Hole, MA, United States) and T.M. Dalton (Kingston, RI, United States)	
Analysis of production and environmental effects of Nile tilapia and white shrimp culture in Thailand	23
J.G. Ferreira (Portugal), L. Falconer (Scotland, United Kingdom), J. Kittiwonich (Bangkok, Thailand), L. Ross (Scotland, United Kingdom), C. Saurel (Nykøbing Mors, Denmark), K. Wellman (Seattle, USA), C.B. Zhu (China) and P. Suvanachai (Bangkok, Thailand)	
Multiresidue antimicrobial determination in Nile tilapia (<i>Oreochromis niloticus</i>) cage farming by liquid chromatography tandem mass spectrometry	37
S.H. Monteiro (Piracicaba, São Paulo, Brazil), J.G. Francisco, T.F. Campion, R.F. Pimpinato, G.C.R. Moura Andrade (Piracicaba, Brazil), F. Garcia (Votuporanga, Brazil) and V.L. Tornisielo (Piracicaba, Brazil)	
A revolution without people? Closing the people-policy gap in aquaculture development	44
G. Krause (Bremerhaven, Germany), C. Brugere (York, United Kingdom), A. Diedrich (Balearic Islands, Spain; Townsville, Queensland, Australia), M.W. Ebeling (Hamburg, Bremen, Germany), S.C.A. Ferse (Bremen, Germany), E. Mikkelsen (Tromsø, Norway), J.A. Pérez Agúndez (Plouzane, France), S.M. Stead (Newcastle upon Tyne, United Kingdom), N. Stybel (Rostock, Germany) and M. Troell (Stockholm, Sweden)	
Predicting environmental drivers for prawn aquaculture production to aid improved farm management	56
C.M. Spillman (Melbourne, VIC, Australia), J.R. Hartog, A.J. Hobday (Hobart, Tasmania, Australia) and D. Hudson (Melbourne, VIC, Australia)	
Mangrove-shrimp farms in Vietnam—Comparing organic and conventional systems using life cycle assessment	66
M. Jonell (Stockholm, Uppsala, Sweden) and P.J.G. Henriksson (Leiden, the Netherlands; Stockholm, Sweden)	
Adoption and impact of integrated rice-fish farming system in Bangladesh	76
A.H.Md. Saiful Islam (Bonn, Germany; Mymensingh, Bangladesh), B.K. Barman and K. Murshed-e-Jahan (Dhaka, Bangladesh)	
Physical and biological evaluation of co-culture cage systems for grow-out of juvenile abalone, <i>Haliotis discus hannai</i> , with juvenile sea cucumber, <i>Apostichopus japonicus</i> (Selenka), with CFD analysis and indoor seawater tanks	86
T. Kim, H.-S. Yoon, S. Shin (Yeosu, Republic of Korea), M.-H. Oh (Ulsan, Republic of Korea), I. Kwon, J. Lee, S.-D. Choi and K.-S. Jeong (Yeosu, Republic of Korea)	
Genetic parameters for body weight and survival in the Pacific White Shrimp <i>Penaeus (Litopenaeus) vannamei</i> affected by a White Spot Syndrome Virus (WSSV) natural outbreak	102
A. Caballero-Zamora, H.H. Montaldo (Coyoacán, Mexico), G.R. Campos-Montes (Coyoacán, Sinaloa, Mexico), E.G. Cienfuegos-Rivas (Tamaulipas, Mexico), A. Martínez-Ortega (Sinaloa, Mexico) and H. Castillo-Juárez (Coyoacán, Mexico)	

(continued on last page of this issue)

(contents continued from back cover)

Reprint of "Effect of dietary substitution of fish oil with flaxseed or sunflower oil on muscle fatty acid composition in juvenile steelhead trout (<i>Oncorhynchus mykiss</i>) reared at varying temperatures"	
M.P.A. Wijekoon, C.C. Parrish and A. Mansour (St. John's, NL, Canada)	108
Effect of vegetable based diets on growth, intestinal morphology, activity of intestinal enzymes and haematological stress indicators in meagre (<i>Argyrosomus regius</i>)	
L. Ribeiro, J. Moura, M. Santos (Olhão, Portugal), R. Colen (Faro, Portugal), V. Rodrigues, N. Bandarra, F. Soares, P. Ramalho, M. Barata, P. Moura, P. Pousão-Ferreira and J. Dias (Olhão, Portugal)	116

Aquaculture

VOL. 448

CONTENTS

1 NOVEMBER 2015

(Abstracts/contents list published in: Aquatic Science and Fisheries Abstracts, Biological Abstracts, Elsevier BIOBASE/Current Awareness in Biological Sciences, Current Contents A, B & ES, EMBiology, Environment Abstracts, Freshwater and Aquaculture Contents Tables, Geo Abstracts, Geobase, Marine Science Contents Tables, Zoological Record). Also covered in the abstract and citation database Scopus®. Full text available in ScienceDirect®

Diseases

Investigation of seaweed extracts as a source of treatment against bacterial fish pathogen S. Thanigaivel, N. Chandrasekaran, A. Mukherjee and J. Thomas (Tamil Nadu, India)	82
Development and efficacy of a novel streptomycin-resistant <i>Flavobacterium johnsoniae</i> vaccine in grass carp (<i>Ctenopharyngodon idella</i>) N. Li (Guangzhou, Shanghai, Wuhan, China), Q. Lin, X. Fu, H. Guo, L. Liu and S. Wu (Guangzhou, Shanghai, China)	93
Concurrent infections of <i>Flavobacterium columnare</i> and <i>Edwardsiella ictaluri</i> in striped catfish, <i>Pangasianodon hypophthalmus</i> in Thailand H.T. Dong, V.V. Nguyen (Bangkok, Thailand), K. Phiwsaiya, W. Gangnonngiw, B. Withyachumnarnkul (Bangkok, Surat Thani, Thailand), C. Rodkhum (Bangkok, Thailand) and S. Senapin (Bangkok, Surat Thani, Thailand)	142
Tubulin mediates <i>Portunus trituberculatus</i> reovirus infection J. Fang, D. Li, R. Xu, L. Zhang, L. Liu and A. Guo (Ningbo, PR China)	196
Microbial biofilm as source of probiotic bacteria for the culture of <i>Litopenaeus vannamei</i> G.S. Ferreira, N.C. Bolívar, S.A. Pereira, C. Guertler, F.d.N. Vieira, J.L.P. Mourão and W.Q. Seiffert (Brazil)	273
CART analysis of environmental factors, biomarkers and gill-associated virus to predict production outcomes for farmed <i>Penaeus monodon</i> L. Elliott (Australia) and L. Owens (Townsville, Australia)	298
Validation of the sensitivities of one-step and two-step reverse-transcription PCR methods for detection of viral hemorrhagic septicemia virus (VHSV) IVa isolates from cultured olive flounder in Korea H.J. Kim (Busan, Republic of Korea)	359
A histology-based fish health assessment of farmed seabass (<i>Dicentrarchus labrax</i> L.) A. Saraiva, J. Costa, J. Serrão, C. Cruz and J.C. Eiras (Porto, Portugal)	375
Naturally concurrent infections of bacterial and viral pathogens in disease outbreaks in cultured Nile tilapia (<i>Oreochromis niloticus</i>) farms H.T. Dong, V.V. Nguyen, H.D. Le (Bangkok, Thailand), P. Sangsuriya (Bangkok, Pathum Thani, Thailand), S. Jitrakorn, V. Saksmerprom, S. Senapin (Pathum Thani, Bangkok, Thailand) and C. Rodkhum (Bangkok, Thailand)	427
Towards a consensus: Multiple experiments provide evidence for constitutive expression differences among sexes and populations of sea lice (<i>Lepeophtheirus salmonis</i>) related to emamectin benzoate resistance J.D. Poley, O.O. Igboeli and M.D. Fast (Charlottetown, PE Canada)	445
Effects of feed supplemented with <i>Lentinula edodes</i> mushroom extract on the immune response of rainbow trout, <i>Oncorhynchus mykiss</i> , and disease resistance against <i>Lactococcus garvieae</i> E. Baba, G. Uluçöy and C. Öntaş (Mugla, Turkey)	476
Evaluation of the effect of percolation and NaCl solutions on viral haemorrhagic septicaemia virus (VHSV) under experimental conditions Aarhus N, (Hørsholm, Denmark)	507

(continued on last page of this issue)

Genetics

Are trunk lateral line anomalies and disoriented scale patterns in European seabass (<i>Dicentrarchus labrax</i>) influenced by genetics?	
C. Costa (Rome, Italy), M. Vandeputte (Jouy-en-Josas, France), F. Antonucci, C. Boglione (Rome, Italy), H. De Verdal (Montpellier, France; Penang, Malaysia) and B. Chatain (Palavas-les-Flots, France)	38
Optimal dietary requirements of zinc in marine medaka <i>Oryzias latipes</i> : Importance of daily net flux	
J. Wang and W.-X. Wang (Kowloon, Hong Kong)	54
Effects of dietary carbohydrate level on growth, biochemical composition and glucose metabolism of juvenile sea cucumber <i>Apostichopus japonicus</i> (Selenka)	
B. Xia, Q.-F. Gao, J. Wang, P. Li, L. Zhang (Shandong Province, China) and Z. Zhang (Beijing, China)	63
Feed-borne exposure to zearalenone leads to advanced ovarian development and limited histopathological changes in the liver of premarket size rainbow trout	
M. Woźny (Olsztyn, Poland), S. Dobosz (Żukowo, Poland), K. Obremski, P. Hliwa, P. Gomułka, A. Łakomski (Olsztyn, Poland), R. Różyński, T. Zalewski (Żukowo, Poland) and P. Brzuzan (Olsztyn, Poland)	71
Detection of QTL associated with three skeletal V in gilthead seabream (<i>Sparus aurata</i> L.): Lordosis, vertebral fusion and jaw abnormality	
D. Negrín-Báez, A. Navarro, J.M. Afonso, R. Ginés and M.J. Zamorano (Las Palmas, Spain)	123
Can survival of European flat oysters following experimental infection with <i>Bonamia ostreae</i> be predicted using QTLs?	
E. Harrang, S. Heurtebise, N. Faury, M. Robert, I. Arzul and S. Lapègue (La Tremblade, France)	521

Nutrition

Dietary lysine requirement of juvenile swimming crab, <i>Portunus trituberculatus</i>	
M. Jin, M.-Q. Wang, Y.-W. Huo, W.-W. Huang, K.-S. Mai and Q.-C. Zhou (Ningbo, Qingdao, China)	1
Effect of proline supplementation on anti-oxidative capacity, immune response and stress tolerance of juvenile Pacific white shrimp, <i>Litopenaeus vannamei</i>	
S.-W. Xie, L.-X. Tian, Y.-M. Li, W. Zhou, S.-L. Zeng, H.-J. Yang and Y.-J. Liu (Guangzhou, China)	105
Evaluation of the distribution of adipose tissues in fish using magnetic resonance imaging (MRI)	
J.-L. Wu, J.-L. Zhang, X.-X. Du, Y.-J. Shen, X. Lao, M.-L. Zhang, L.-Q. Chen and Z.-Y. Du (Shanghai, China)	112
Dietary n-3 LC-PUFA requirements in silvery-black porgy juveniles (<i>Sparidentex hasta</i>)	
M.T. Mozanadeh, J.G. Maramba, V. Yavari, N. Agh, T. Mohammadian (Ahwaz, Urmia, Iran) and E. Gisbert (Sant Carles de la Ràpita, Spain)	151
Dietary leucine level affects growth performance, whole body composition, plasma parameters and relative expression of TOR and TNF- α in juvenile blunt snout bream, <i>Megalobrama amblycephala</i>	
M. Ren, H.-M. Habte-Tsion (Wuxi, China), B. Liu, L. Miao, X. Ge, J. Xie, H. Liang (Wuxi, China), Q. Zhou and L. Pan (Wuxi, China)	162
Comparative study of the nutritional composition of wild versus farmed yellowtail (<i>Seriola lalandi</i>)	
B. O'Neill, A. Le Roux and L.C. Hoffman (South Africa)	169
Successful fish oil sparing in White Seabass feeds using saturated fatty acid-rich soybean oil and 22:6n-3 (DHA) supplementation	
A.N. Rombenso, J.T. Trushenski, D. Jirsa and M. Drawbridge (Carbondale, IL, San Diego, CA, USA)	176
Restricted process water limits starch gelatinization, and reduces digestibility of starch, lipid, and energy in extruded rainbow trout (<i>Oncorhynchus mykiss</i>) diets	
T. Storebakken (Ås, Norway), Y. Zhang (Ås, Norway; Zhejiang, China), O.F. Kraugerud (Ås, Norway), J. Ma (Yantai, China), M. Øverland (Ås, Norway), E. Apper and A. Feneuil (Marckolsheim, France)	203
Coffee bean in common carp, <i>Cyprinus carpio</i> L. diets: Effect on growth performance, biochemical status, and resistance to waterborne zinc toxicity	
M. Abdel-Tawwab, K.M. Sharafeldin, M.N.M. Mosaad and N.E.M. Ismaiel (Sharqia, Benha, Egypt)	207
Feed technological and nutritional properties of hydrolyzed wheat gluten when used as a main source of protein in extruded diets for rainbow trout (<i>Oncorhynchus mykiss</i>)	
T. Storebakken (Ås, Norway), Y. Zhang (Ås, Norway; Zhejiang, China), J. Ma (Ås, Norway; Yantai, China), M. Øverland, L.T. Mydland, O.F. Kraugerud (Ås, Norway), E. Apper and A. Feneuil (Marckolsheim, France)	214
Gastrointestinal evacuation time, but not nutrient digestibility, of greenlip abalone, <i>Haliotis laevigata</i> Donovan, is affected by water temperature and age	
K.-L. Currie, B. Lange, E.W. Herbert (Australia), J.O. Harris and D.A.J. Stone (Adelaide, Gawler, SA, Australia)	219
Effects of parental diets supplemented with different lipid sources on <i>Octopus maya</i> embryo and hatching quality	
J.F. Tercero (Sisal, Merida, Mexico), C. Rosas, M. Mascaro (Sisal, Mexico), G. Poot (Merida, Mexico), P. Dominguez (Spain), E. Noreña, C. Caamal-Monsreal, C. Pascual (Sisal, Mexico), J. Estefanell (Telde, Spain), and P. Gallardo (Sisal, Mexico) ...	234
Ingestion and digestion of live microalgae and microalgae concentrates by sandfish, <i>Holothuria scabra</i> , larvae	
N.D.Q. Duy, I. Pirozzi and P.C. Southgate (Townsville, Queensland, Australia)	256
Influence of dietary phospholipid on early development and performance of Atlantic salmon (<i>Salmo salar</i>)	
J.E. Taylor, L. Martinez-Rubio, J. del Pozo, J.M. Walton, A.E. Tinch, H. Migaud and D.R. Tocher (Stirling, Edinburgh, Grangemouth, UK)	262
Effects of dietary enrichment with alpha-tocopherol acetate and post-harvest filleting on lipid oxidation and flesh quality of tropical farmed barramundi (<i>Lates calcarifer</i>)	
B.C. Jones and A.G. Carton (Townsville, Queensland, Australia)	280

Relative contribution of natural productivity and compound feed to tissue growth in blue shrimp (<i>Litopenaeus stylirostris</i>) reared in biofloc: Assessment by C and N stable isotope ratios and effect on key digestive enzymes E. Cardona (Taravao, French Polynesia; Nouméa, New Caledonia), B. Lorgeoux (Taravao, French Polynesia), C. Geffroy (Nouméa, New Caledonia), P. Richard (La Rochelle, France), D. Saulnier (Taravao, French Polynesia), Y. Gueguen (Taravao, French Polynesia; Montpellier, France) G. Guillou (La Rochelle, France) and L. Chim (Nouméa, New Caledonia)	288
The effect of macroalgal, formulated and combination diets on growth, survival and feed utilisation in the red abalone <i>Haliotis rufescens</i> J.O.G. Kemp, P.J. Britz (Grahamstown, South Africa) and P.H. Toledo Agüero (Coquimbo, Chile)	306
Amino acid profiles of meagre (<i>Argyrosomus regius</i>) larvae: Towards the formulation of an amino acid balanced diet M. Saavedra (Lisbon, Portugal), A. Candeias-Mendes, S. Castanho (Olhão, Portugal), B. Teixeira, R. Mendes (Lisbon, Portugal) and P. Pousão-Ferreira (Olhão, Portugal)	315
Assessing the bioavailability of L-lysine sulfate compared to L-lysine HCl in rainbow trout (<i>Oncorhynchus mykiss</i>) C.D. Powell (Guelph, Ontario, Canada), M.A.K. Chowdhury (St-Hyacinthe, Quebec, Canada) and D.P. Bureau (Guelph, Ontario, Canada)	327
Development of formulated diets for snakehead (<i>Channa striata</i> and <i>Channa micropeltes</i>): Can phytase and taurine supplementation increase use of soybean meal to replace fish meal? T.T.T. Hien, T.T. Be (Viet Nam), C.M. Lee and D.A. Bengtson (Kingston, RI, USA)	334
First development of various vegetable-based diets and their suitability for abalone <i>Haliotis tuberculata coccinea</i> Reeve M.P. Viera, G. Courtois de Viçosa, L. Robaina and M.S. Izquierdo (Las Palmas, Spain)	350
Influence of dietary lipid on growth performance and body composition of the Gulf corvina, <i>Cynoscion othonopterus</i> M.L. González-Félix, C. Minjarez-Osorio, M. Perez-Velazquez and P. Urquidez-Bejarano (Hermosillo, Mexico)	401
Threonine influences the absorption capacity and brush-border enzyme gene expression in the intestine of juvenile blunt snout bream (<i>Megalobrama amblycephala</i>) H.-M. Habte-Tsion (Wuxi, PR China; Massawa, Eritrea), M. Ren, B. Liu, X. Ge, J. Xie, R. Chen, Q. Zhou and L. Pan (Wuxi, PR China)	436
A new view of the fish gut microbiome: Advances from next-generation sequencing M. Ghanbari (Austria; Zabol, Iran), W. Kneifel and K.J. Domig (Austria)	464
Evaluation of soy protein concentrate as a substitute for fishmeal in diets for juvenile starry flounder (<i>Platichthys stellatus</i>) P.-Y. Li, J.-Y. Wang, Z.-D. Song, L.-M. Zhang, H. Zhang, X.-X. Li and Q. Pan (Guangzhou, Yantai, PR China)	578

Physiology and Endocrinology: Fish

Influence of stocking density on growth, metabolism and stress of thick-lipped grey mullet (<i>Chelon labrosus</i>) juveniles V. de las Heras (Puerto Real, Spain), J.A. Martos-Sitche, M. Yúfera, J.M. Mancera and G. Martínez-Rodríguez (Puerto Real, Spain)	29
Reproduction of hatchery-produced meagre <i>Argyrosomus regius</i> in captivity III. Comparison between GnRHa implants and injections on spawning kinetics and egg/larval performance parameters C.C. Mylonas, E. Fatira (Iraklion, Greece), P. Karkut (Iraklion, Greece; Krakow, Poland), M. Papadaki, I. Sigelaki (Iraklion, Greece) and N.J. Duncan (Tarragona, Spain)	44
Molecular cloning of a proglucagon in a cyprinid fish (<i>Schizothorax prenanti</i>): mRNA tissue distribution and quantification during periprandial changes and fasting F. Lin, H. Chen, J. Liu, Y. Gao, X. Zhang, J. Hao, D. Chen, H. Wu, D. Yuan, T. Wang and Z. Li (Chengdu, China)	250
Experimental design and statistical analyses of fish growth studies H. Thorarensen (Sauðárkrúkur, Iceland), G.K. Kubiriza (Uganda; Sauðárkrúkur, Reykjavik, Iceland) and A.K. Imsland (Bergen, Norway; Kópavogur, Iceland)	483
Determination of differences in the biochemical properties of sperm activating and non-activating ovarian fluids and their influences on sperm motility in rainbow trout (<i>Oncorhynchus mykiss</i>) B.E. Inanan and F. Ögretmen (Turkey)	539
Ontogenetic development of digestive enzymes in Sobaity sea bream <i>Sparidentex hasta</i> larvae under culture condition S. Nazemroaya, R. Yazdanparast, M.A. Nematollahi, H. Farahmand and Q. Mirzadeh (Karaj, Tehran, Bandar-e-Abbas, Iran)	545
Stress responses to mild and acute temperature decrease for two strains of sea cucumber <i>Apostichopus japonicus</i> J. Ning, Y. Chang, W. Liu, J. Song, W. Zhang and J. Ding (Dalian, PR China)	552
Semen from sex-reversed rainbow trout of spring strain can be successfully cryopreserved and used for fertilization of elevated number of eggs A. Ciereszko, G.J. Dietrich, J. Nynca, J. Krom and S. Dobosz (Olsztyn, Żukowo, Poland)	564

Physiology and Endocrinology: Molluscs and Crustaceans

Effects of dietary zinc on the growth, digestive enzyme activities, muscle biochemical compositions, and antioxidant status of the giant freshwater prawn <i>Macrobrachium rosenbergii</i> T. Muralisankar, P. Saravana Bhavan, S. Radhakrishnan, C. Seenivasan, V. Srinivasan and P. Santhanam (Coimbatore, Tiruchirappalli, India)	98
Characterisation of the role of an alkaline protease from <i>Vibrio midae</i> SY9 in enhancing the growth rate of cultured abalone fed a probiotic-supplemented feed R.J. Huddy and V.E. Coyne (Cape Town, South Africa)	128

Cloning and expression analysis of two carbonic anhydrase genes in white shrimp <i>Litopenaeus vannamei</i> , induced by pH and salinity stresses M. Liu, S. Liu, Y. Hu and L. Pan (Qingdao, China)	391
Captive maturation studies in <i>Penaeus monodon</i> by GH silencing using constitutively expressed long hairpin RNA R. Das, G. Krishna, H. Priyadarshi, G.-B. P., A. Pavan-Kumar, K.V. Rajendran, A.K. Reddy, M. Makeish and A. Chaudhari (Mumbai, India)	512
Differential expression of <i>X-box binding protein 1</i> during ovarian development and association between its SNP and growth-related parameters of the giant tiger shrimp <i>Penaeus monodon</i> S. Prasertlux, P. Yocawibun (Khlong Luang, Bangkok, Thailand), S. Janpoom, S. Klinbunga, P. Menasveta and B. Khamnamtong (Khlong Luang, Bangkok, Thailand)	531
Production Science	
Changes in fish community structure associated with cage aquaculture in Lake Malawi, Africa A.M. Macuiane (Duluth, MN, USA; Quelimane, Mozambique), R.E. Heckya and S.J. Guildford (Duluth, MN, USA; Quelimane, Mozambique)	8
Freshwater treatment of amoebic gill disease and sea-lice in seawater salmon production: Considerations of water chemistry and fish welfare in Norway M.D. Powell, P. Reynolds and T. Kristensen (Bergen, Innedyr, Boda, Norway)	18
A simple spectrophotometric method for biomass measurement of important microalgae species in aquaculture D.U. Santos-Ballardo (Culiacán, Mexico), S. Rossi (Cerdanyola del Vallès, Spain; Cancún, Mexico), V. Hernández, R.V. Gómez, M. del Carmen Rendón-Unceta (Puerto Real, Spain), J. Caro-Corrales and A. Valdez-Ortiz (Culiacán, Mexico)	87
Effect of biofloc technology on growth, digestive enzyme activity, hematology, and immune response of genetically improved farmed tilapia (<i>Oreochromis niloticus</i>) L. Long, J. Yang, Y. Li, C. Guan and F. Wu (Shanghai, China)	135
Development of sea based container culture for rearing European lobster (<i>Homarus gammarus</i>) around South West England C.L. Daniels (UK), B. Wills, M. Ruiz-Perez, E. Miles, R.W. Wilson and D. Boothroyd (Padstow, Exeter, UK)	186
Effects of feeding rates and feeding frequency on the growth performances of juvenile hybrid sturgeon, <i>Acipenser schrenckii</i> Brandt × <i>A. baeri</i> Brandt L. Luo, T. Li, W. Xing, M. Xue, Z. Ma, N. Jiang and W. Li (Beijing, China)	229
Experimental hybridization and genetic identification of Pacific abalone <i>Haliotis discus hannai</i> and green abalone <i>H. fulgens</i> W. You, Q. Guo, F. Fan, P. Ren, X. Luo and C. Ke (Xiamen, PR China)	243
Improvement of fish and pearl yields and nutrient utilization efficiency through fish-mussel integration and feed supplementation J.-Y. Tang, Y.-X. Dai, Y. Wang (Hangzhou, China), J.G. Qin (Adelaide, SA, Australia) and Y.-M. Li (Hangzhou, China)	321
The effects of Zhikong scallop (<i>Chlamys farreri</i>) on the microbial food web in a phosphorus-deficient mariculture system in Sanggou Bay, China J. Lu, L. Huang, T. Xiao, Z. Jiang and W. Zhang (Xiamen, Qingdao, China)	341
A model for the future: Ecosystem services provided by the aquaculture activities of Veta la Palma, Southern Spain M.E.M. Walton (Anglesey, UK), C. Vilas, J.P. Cañavate (Cadiz, Spain), E. Gonzalez-Ortegon (Anglesey, UK), A. Prieto, S.A. van Bergeijk, A.J. Green, M. Librero, N. Mazuelos (Cadiz, San Juan de Aznalfarache, Spain) and L. Le Vay (Anglesey, UK)	382
The effects of rearing temperature on reproductive conditioning of stalked barnacles (<i>Pollicipes pollicipes</i>) S.C. Franco (Newcastle upon Tyne, United Kingdom; Évora, Portugal), N. Aldred (Newcastle upon Tyne, United Kingdom), A.V. Sykes (Faro, Portugal), T. Cruz (Évora, Portugal) and A.S. Clare (Newcastle upon Tyne, United Kingdom)	410
The effect of water management on extensive aquaculture food webs in the reconstructed wetlands of the Doñana Natural Park, Southern Spain M.E.M. Walton (UK), C. Vilas, C. Coccia, A.J. Green, J.P. Cañavate, A. Prieto, S.A. van Bergeijk, J.M. Medialdea (El Puerto de Santa María, San Juan de Aznalfarache, Spain), H. Kennedy, J. King and L. Le Vay (UK)	451
Selection for muscle fat content and triploidy affect flesh quality in pan-size rainbow trout, <i>Oncorhynchus mykiss</i> F. Lefevre, M. Cardinal, J. Bugeon, L. Labbe, F. Medale and E. Quillet (Rennes, Nantes Cedex 3, Sizun, Saint-Pée-sur-Nivelle, Jouy-en-Josas, France)	569
Sustainability and Society	
Utilisation of feed resources in production of Atlantic salmon (<i>Salmo salar</i>) in Norway T. Ytrestøyl, T.S. Aas and T. Åsgård (Sunndalsøra, Norway)	365
Spatial correlation and potential conflicts between sea cage farms and coral reefs in South East Asia N. Hedberg, N. Kautsky (Stockholm, Sweden), M. Hellström (Copenhagen K, Denmark) and M. Tedengren (Stockholm, Sweden)	418
Assessment of impact of shrimp farming on coastal groundwater using Geographical Information System based Analytical Hierarchy Process P. Nila Rekha, R. Gangadharan, P. Ravichandran, P. Mahalakshmi, A. Panigrahi and S.M. Pillai (Chennai, India)	491

Aquaculture Research

Volume 46, Number 9, September 2015

Contents

Original Articles

- 2049 Short term effects of a commercial eastern oyster nursery upon nutrient and plankton dynamics of a coastal embayment: observations from mesocosm experiments
Y Li, S L Moseck, M S Dixon, J M Rose, B C Smith and G H Wikfors
- 2065 Efficacy of 17 α -methyl testosterone and letrozole on sex reversal of protogynous grouper, *Epinephelus tauvina* (Forsk., 1775) and spawning performance of sex-reversed males
R Ranjan, B Xavier, B Dash, L L Edward, R D Suresh and P S Kumar
- 2073 Effects of varied levels of incorporation of *Labeo gonius* in carp polyculture system in India
J Jena, P C Das, G Mitra, B Patro, D Mohanta and B Mishra
- 2079 Stimulatory effect of thyroid hormones improves larval development and reproductive performance in alligator gar (*Atractosteus spatula*) and spotted gar (*Lepisosteus oculatus*)
S Castillo, K Bollfrass, R Mendoza, Q Fontenot, J P Lazo, C Aguilera and A Ferrara
- 2092 Bioavailability of arginine from Indian mustard protein concentrate and meal compared with that of a soy protein concentrate in rainbow trout (*Oncorhynchus mykiss*)
M A K Chowdhury, K P Iñiguez, C F M de Lange, V Osborne, A Lemme and D P Bureau
- 2104 Non-invasive fast real-time PCR assay for detection of the enteric parasite *Enteromyxum scophthalmi* in cultured turbot (*Scophthalmus maximus* L.)
M Alonso, F C Lago, M Gómez-Reino, J Fernández Casal, I Martín Varela, J M Vieites and M Espiñeira
- 2116 Effects of dietary magnesium on the growth, carapace strength and tissue magnesium concentrations of soft-shelled turtle, *Pelodiscus sinensis* (Wiegmann)
C-Y Chen and C-H Huang
- 2124 Effects of stocking density and water conditioners on yolk-sac larvae of two marine finfish during simulated air transport
K Stuart, M Losordo, P Olin and M Drawbridge
- 2133 Muscle activity as a key indicator of welfare in farmed European sea bass (*Dicentrarchus labrax* L. 1758)
P Carbonara, M Scolamacchia, M T Spedicato, W Zupa, R S McKinley and G Lembo
- 2147 Impact of feed ration on growth and the results of sterlet, *Acipenser ruthenus* L., artificial reproduction
M Szczepkowski, R Kolman and B Szczepkowska
- 2153 Production of inbred larvae through self-fertilization using oocytes and cryopreserved sperm from the same individuals after sex reversal in eastern oyster *Crassostrea virginica*
H Yang, Y Wang, X Guo and T R Tiersch
- 2166 Evaluation of frozen Umbrella-stage *Artemia* as first animal live food for *Litopenaeus vannamei* (Boone) larvae
M de L Cobo, R Wouters, M Wille, S Sonnenholzner and P Sorgeloos
- 2174 Fish oil-based finishing diets strongly increase long-chain polyunsaturated fatty acid concentrations in farm-raised common carp (*Cyprinus carpio* L.)
S Schultz, A-M Koussoroplis, Z Changizi-Magrhoor, J Watzke and M J Kainz
- 2185 Strong phenotypic and genetic correlation between size and first maturity in Atlantic cod *Gadus morhua* L. reared in commercial conditions
T Kristjánsson and T Amason
- 2194 Effect of various sources of dietary additive on growth, body composition and serum chemistry of juvenile olive flounder (*Paralichthys olivaceus*)
J Lee, W-G Jung, S H Cho and D S Kim
- 2204 Antifungal effect of *Origanum onites* essential oil as an alternative to formalin in the artificial incubation of narrow-clawed crayfish (*Astacus leptodactylus* Eschscholtz, 1823)
S B Koca and M Cevikbas
- 2211 A non-classical biomanipulation experiment in Gonghu Bay of Lake Taihu: control of *Microcystis* blooms using silver and bighead carp
L Guo, Q Wang, P Xie, M Tao, J Zhang, Y Niu and Z Ma
- 2225 The effectiveness of several commercial antifouling treatments at reducing biofouling on finfish aquaculture cages in British Columbia
C D Edwards, K A Pawluk and S F Cross
- 2236 Physiological and reproductive response to varying quantitative lipid inclusion in diets for Gulf killifish *Fundulus grandis* Baird and Girard
J T Patterson and C C Green
- 2246 Changes of heritability and genetic correlations in production traits over time in red abalone (*Haliotis rufescens*) under culture
K B Brokordt, F M Winkler, W J Farias, R C González, F Castaño, P Fullsack and C M Herbringer
- 2260 An artificial oyster-shell reef for the culture and stock enhancement of sea cucumber, *Apostichopus japonicus*, in shallow seawater
L Zhang, T Zhang, Q Xu, T Qiu, H Yang and S Liu
- 2270 Leucocyte profile and growth rates as indicators of crowding stress in pejerrey fingerlings (*Odontesthes bonariensis*)
Y D Zebal, B Zafalon-Silva, M W Mascarenhas and R B Robaldo
- 2277 Effect of dietary supplementation of periphyton on growth, immune response and metabolic enzyme activities in *Penaeus monodon*
P S Shyne Anand, M P S Kohli, S D Roy, J K Sundaray, S Kumar, A Sinha, G H Pailan and M K Sukham
- 2289 Effects of starvation on survival, growth and development of *Exopalaemon carinicauda* larvae
C Zhang, Z Li, F Li and J Xiang
- ### Short Communication
- 2300 Amoxicillin-florfenicol combination reduces mortality in olive flounder (*Paralichthys olivaceus*) experimentally infected by *Streptococcus iniae*
S-J Lee and S-C Park

Aquaculture Research

Volume 46, Number 10, October 2015

Contents

Review Article

- 2305 Greening the blue revolution of small-scale freshwater aquaculture in Mymensingh, Bangladesh
N Ahmed and K A Toufique

Original Articles

- 2323 Gene expression pattern of digestive and antioxidant enzymes during the larval development of reared Atlantic bluefin tuna (ABFT).
Thunnus thynnus L.
D Mazurais, D Covés, N Papandroulakis, A Ortega, E Desbruyeres, C Hualvan, M M Le Gall, F de la Gándara and C L Cahu
- 2332 Evaluation of nutritional values of selected commercial fish meal sources in turbot (*Psetta maxima*) diets
H Sevgili, A Kurtoglu, M Oikawa, D Fedekar, Y Emre and N Takono
- 2344 Diversity of autochthonous bacterial communities in the intestinal mucosa of grass carp (*Ctenopharyngodon idellus*) (Valenciennes) determined by culture-dependent and culture-independent techniques
H Li, Q Zhong, S Wirth, W Wang, Y Hao, S Wu, H Zou, W Li and G Wang
- 2360 Influence of dietary zinc on muscle composition, flesh quality and muscle antioxidant status of young grass carp (*Ctenopharyngodon idella* Val.)
Y-P Wu, L Feng, W-D Jiang, Y Liu, J Jiang, S-H Li, L Tang, S-Y Kuang and X-Q Zhou
- 2374 Differential pathogenicity of five *Streptococcus agalactiae* isolates of diverse geographic origin in Nile tilapia (*Oreochromis niloticus* L.)
J J Evans, D J Pasnik and P H Klesius
- 2382 Effect of dietary lipid oxidation with vitamin C and E supplementation on fillet quality of red sea bream, *Pagrus major* (Temminck & Schlegel) during storage
J Gao and S Koshio
- 2392 Novel droplet vitrification combined with fish antifreeze protein type III enhances cryoprotection of semen in wild endangered Persian sturgeon *Acipenser persicus* (Borodin, 1897)
A Abed-Elmdoust, H Farahmand, B Mojazi-Amiri, G Rafiee and R Rahimi
- 2398 Enhanced growth and retarded gonadal development of farmed rainbow trout, *Oncorhynchus mykiss* (Walbaum) following a long-day photoperiod
A Noori, B Mojazi Amiri, A Mirvaghefi, G Rafiee and B Kalvani Neitaki
- 2407 Effects of chronic upper temperature regimes on growth of two geographical strains of channel and hybrid catfish
H A Stewart, B Bosworth, L Petrie-Hanson, J A Martin and P J Allen
- 2418 Combined effects of temperature and salinity on yolk utilization in Nile tilapia (*Oreochromis niloticus*)
W Hui, L Guodong, L Jiahui, Y Hongshuai, Q Jun and X Pao
- 2426 Spermiation time affect the mill quality indices of the Russian sturgeon, *Acipenser gueldenstaedtii*, Brandt & Ratzeburg, 1833
M Halimi, A Mohammadi, R Norousta, H Khara and M R Karimi
- 2431 Evaluation of transportation methods of juveniles of the Australasian sea cucumber, *Australostichopus mollis*
L N Zamora and A G Jeffs
- 2443 Sperm cryopreservation of silver barb (*Barbodes gonionotus*): cryoprotectants, cooling rate and storage time on sperm quality
V Vuthiphanchai, K Wilairattanadit, S Chomphuthawach, T Sooksawat and S Nimrat
- 2452 Improvement in wild endangered Persian sturgeon, *Acipenser persicus* (Borodin, 1897) semen cryopreservation by 2-hydroxypropyl-beta-cyclodextrin (H β CD)
R Rahimi, H Farahmand, A Mirvaghefi, G Rafiee and A Abed Elmdoust
- 2457 Effects of water exchange protocols on water quality, sedimentation rate and production performance of *Penaeus monodon* in earthen ponds
R K Mohanty, A Mishra, D K Panda and D U Patil
- 2469 Cottonseed oil as a complementary lipid source in diets for gilthead seabream *Sparus aurata* juveniles
E A Wassef, S H Shalaby and N E Saleh
- 2481 Effect of two extruded diets with different fish and squid meal ratio on growth, digestibility and body composition of *Octopus vulgaris* (Cuvier, 1797)
P Querol, I Gairin, G Guerra, R Monge, M Jover and A Tomas
- 2490 Effect of soybean meal replacement by cottonseed meal on growth, feed utilization and some blood physiological/biochemical indices of juvenile black carp, *Mylopharyngodon piceus*
Y Hu, Y Huang, F Feng, L Zhong, Q Ai, T Xiao and H Wen
- 2501 Assessment of temperature or salinity effects on larval development by catecholamine-induced metamorphosis of hatchery-reared flat oyster, *Ostrea angasi* (Sowerby 1871) larvae
S O'Connor, N Moltschanivsky, C J S Bolch and W O'Connor
- 2512 The effects of starving and feeding on Dover sole (*Solea solea*, Soleidae, Linnaeus, 1758) stress response and early larval development
C C Piccinetti, M Donati, G Radaelli, G Caporale, G Mosconi, F Palermo, L Cossignani, R Salvatori, R P Lopez and I Olivetto
- 2527 The influence of different microalgal diets on European clam (*Ruditapes decussatus*, Linnaeus, 1758) larvae culture performances
D. Matias, R Ben-Hamadou, S Joaquim, A M Matias, P Sobral and A Leitão
- 2544 Effect of dietary lipids and vitamin E on growth performance, body composition, anti-oxidative ability and resistance to *Aeromonas hydrophila* challenge of juvenile Chinese mitten crab *Eriocheir sinensis*
L Wang, L Chen, J Qin, E Li, N Yu, Z Du, Y Kong and J Qi

Short Communications

- 2559 Can mussels change phytoplankton community structure and enhance prawn production in semi-enclosed prawn ponds?
Q Liu, M Hu and Z Wu
- 2565 Molecular components related to egg quality during the reproductive season of turbot (*Scophthalmus maximus*)
Y Jia, Z Meng, X Liu and J Lei

California Fish and Game

Volume 101

Number 2

Contents

Notes from the Editor	
VERNON C. BLEICH	86
Experimental enhancement of pickleweed, Suisun Bay, California	
A. KEITH MILES, DIRK H. VAN VUREN, DANIKA C. TSAO, AND JULIE L. YEE	87
Observations of the non-native Pacific oyster (<i>Crassostrea gigas</i>) in San Diego County, California	
JEFFREY A. CROOKS, KAI R. CROOKS, AND AIDEN J. CROOKS	101
Effects of loading density during transport on physiological stress and survival of Sacramento-San Joaquin Delta fishes	
ZACHARY A. SUTPHIN AND CHARLES D. HUETH	108
Mitochondrial DNA perspectives on the introduction and spread of wild pigs in California	
RICK A. SWEITZER, BLAKE E. McCANN, RONALD E. LOGGINS, AND REBECCA B. SIMMONS	131
A swimming deep-sea penaeoid shrimp photographed off California	
MARY K. WICKSTEN AND LINDA A. KUHNZ	146
Observations of predation and loss among leopard sharks and brown smoothhounds in San Francisco Bay, California	
RONALD A. RUSSO	149
Obituary: Kimberly A. Nicol, 1956–2015	158
Book Review: Becoming a compelling communicator for conservation: the essential reference for everyone who desires to make a difference	159
Books Received and Available for Review	161

California Fish and Game

Volume 101

Number 3

Contents

Notes from the Editor VERNON C. BLEICH	164
A fortuitous mitigation for desert mule deer along the All-American Canal MELANIE E. BUCCI AND PAUL R. KRAUSMAN	165
Length-weight and length-length relationships, condition index, and trophic level of <i>Sphyraena idlastes</i> Heller and Snodgrass, 1903 (Teleostei: Sphyraenidae) ADRIAN F. GONZALEZ-ACOSTA, GORGONIO RUIZ-CAMPOS, LLOYD T. FINDLEY, AND JAVIER ROMO-RIOS	178
Abundance, size, and occurrence of <i>Arbacia stellata</i> in Orange County, California DIRK BURCHAM AND NANCY L. CARUSO	184
First case of abnormality in the chilhuil sea catfish (<i>Bagre panamensis</i>) from Mexican waters JUAN A. MALDONADO-COYAC, OFELIA ESCOBAR-SANCHEZ, JORGE S. RAMIREZ-PEREZ, XCHEL G. MORENO-SANCHEZ, AND DEIVIS S. PALACIOS-SALGADO	188
Coyote visitation to water sources as evidence of a decline in coyote numbers KYLE J. MARSH AND REGINALD H. BARRETT	193
Commentary: Wildlife, the public trust, and the modern-day "Tragedy of the Commons" JAMES A. BAILEY	200

CANADIAN JOURNAL OF *Agricultural Economics*

REVUE CANADIENNE
D'Agroéconomie

VOL. 63 NO. 3

SEPTEMBER

2015

ARTICLES

- The Effect of Agricultural Zoning on Rural Residential Property Values:
An Application to Ontario's Greenbelt ♦ *Richard J. Vyn* 281
- Optimal Protein Segregation Strategies for Wheat Growers
♦ *Ruiqing Miao and David A. Hennessy* 309
- Hog Industry Structure and the Stringency of Environmental Regulation
♦ *Azzeddine Azzam, Gibson Nene and Karina Schoengold* 333
- The New Tomato Suspension Agreement: What Are the Implications
for Trade Flows? ♦ *Pascal L. Ghazalian* 359
- Optimal Integrated Strategies to Control an Invasive Weed
♦ *Morteza Chalak and David J. Pannell* 381
- Harvesting Choices and Timber Supply among Landowners in the Southern
United States ♦ *Daowei Zhang, Xing Sun, Brett J. Butler*
and *Jeffrey P. Prestemon* 409



	iii–iv	PUBLISHER'S MESSAGE
	v–vi	MESSAGE DE L'ÉDITEUR
	ARTICLES	ARTICLES
Kathryn A. Kuchapski and Joseph B. Rasmussen	955–967	Food chain transfer and exposure effects of selenium in salmonid fish communities in two watersheds in the Canadian Rocky Mountains
Ingrid Spies, Paul D. Spencer, and André E. Punt	968–982	Where do we draw the line? A simulation approach for evaluating management of marine fish stocks with isolation-by-distance stock structure
S.F. Colborne, A.D.M. Clapp, F.J. Longstaffe, and B.D. Neff	983–990	Foraging ecology of native pumpkinseed (<i>Lepomis gibbosus</i>) following the invasion of zebra mussels (<i>Dreissena polymorpha</i>)
Jean Martin, Quentin Rougemont, Hilaire Drouineau, Sophie Launey, Philippe Jatteau, Gilles Bareille, Sylvain Berail, Christophe Pécheyran, Eric Feunteun, Séverine Roques, David Clavé, David Jose Nachón, Carlos Antunes, Micaela Mota, Elodie Réveillac, and Françoise Daverat	991–1003	Dispersal capacities of anadromous Allis shad population inferred from a coupled genetic and otolith approach

Continued on inside back cover / Suite au verso

Mark S. Ridgway and Trevor A. Middel	1004–1014	Coastal zone occupancy by double-crested cormorants on a Laurentian Great Lake before, during, and after a food web regime shift
John A. Colman, Jacob I. Nogueira, Oscar C. Pancorbo, Carol A. Batdorf, and Barbara A. Block	1015–1023	Mercury in Pacific bluefin tuna (<i>Thunnus orientalis</i>): bioaccumulation and trans-Pacific Ocean migration
Jennifer A. Cahalan, Jason Gasper, and Jennifer Mondragon	1024–1036	Catch estimation in the federal trawl fisheries off Alaska: a simulation approach to compare the statistical properties of three trip-specific catch estimators
Désirée Tommasi, Janet Nye, Charles Stock, Jonathan A. Hare, Michael Alexander, and Katie Drew	1037–1047	Effect of environmental conditions on juvenile recruitment of alewife (<i>Alosa pseudoharengus</i>) and blueback herring (<i>Alosa aestivalis</i>) in fresh water: a coastwide perspective
Eric B. Taylor and Shannan L. May-McNally	1048–1057	Genetic analysis of Dolly Varden (<i>Salvelinus malma</i>) across its North American range: evidence for a contact zone in southcentral Alaska
Ann M. Balasubramaniam, Roland I. Hall, Brent B. Wolfe, Jon N. Sweetman, and Xiaowa Wang	1058–1072	Source water inputs and catchment characteristics regulate limnological conditions of shallow subarctic lakes (Old Crow Flats, Yukon, Canada)
Molly L. Payne Wynne, Karen A. Wilson, and Karin E. Limburg	1073–1086	Retrospective examination of habitat use by blueback herring (<i>Alosa aestivalis</i>) using otolith microchemical methods
Sigurður Guðjónsson, Sigurður Már Einarsson, Ingi Rúnar Jónsson, and Jóhannes Guðbrandsson	1087–1098	Marine feeding areas and vertical movements of Atlantic salmon (<i>Salmo salar</i>) as inferred from recoveries of data storage tags
Katherine A. Roach and Kirk O. Winemiller	1099–1112	Hydrologic regime and turbidity influence entrance of terrestrial material into river food webs
Sean C. Godwin, Lawrence M. Dill, John D. Reynolds, and Martin Krkošek	1113–1120	Sea lice, sockeye salmon, and foraging competition: lousy fish are lousy competitors
	DISCUSSIONS	DISCUSSIONS
Steven M. Carr and William S. Davidson	1121	Greenland Halibut in the North Atlantic are genetically homogeneous: a response to Roy et al. (2014)
Denis Roy, Margaret A. Treble, David C. Hardie, James D. Reist, and Daniel E. Ruzzante	1122–1123	Panmixia and incomplete lineage sorting can give similar mtDNA signals: response to comment by Carr and Davidson (2015)

CONTENTS - VOLUME 16 ISSUE 3 SEPTEMBER 2015

ORIGINAL ARTICLES

- 373 *The food limitation hypothesis for juvenile marine fish*
O Le Pape and S Bonhommeau
- 399 *Risk sensitivity and the behaviour of fishing vessels*
N A Dowling, C Wilcox and M Mangel
- 426 *Approaches to fully documented fisheries: practical issues and stakeholder perceptions*
S C Mangi, P J Dolder, T L Catchpole, D Rodmell and N de Rozario
- 453 *Understanding fisheries credit systems: potentials and pitfalls of managing catch efficiency*
M C Van Riel, S R Bush, P A M van Zwieten and A P J Mol
- 471 *Managing inequality or managing stocks? An ethnographic perspective on the governance of small-scale fisheries*
M Fabin, S Foale and M Macintyre
- 486 *The use of acoustic cameras in shallow waters: new hydroacoustic tools for monitoring migratory fish population. A review of DIDSON technology*
F Martignac, A Daroux, J-L Bagliniere, D Ombredane and J Guillard

- 511 *The increased efficiency of fish swimming in a school*
C K Hemelrijk, D A P Reid, H Hildenbrandt and J T Padding
- 522 *A centurial development of the North Sea fish megafauna as reflected by the historical Swedish longlining fisheries*
M Cardinale, V Bartolino, H Svedäng, A Sundelöf, R T Poulsen and M Casini

GHOTI

- 534 *The evolution of a discard policy in Europe*
L Borges

BOOK REVIEWS

- 541 *The Biology of Sharks and Rays*
V J Wearmouth
- 543 *The Carangids of India – A Monograph*
W F Smith-Vaniz and K E Carpenter



論 文

- ブリより分離された抗血清非凝集性 *Lactococcus garvieae* (英文): 迫中大作・吉村直人・福田 稔・山下亜純・浦崎慎太郎・和田善信・吉田照豊 37
- ヒラメ皮膚損傷部における *Tenacibaculum maritimum* の感染動態 (英文): T. Rahman・菅 向志郎・金井 欣也・杉原志貴 44
- コイでみられた生殖腺未分化癌の病理組織学的および免疫組織化学的研究 (英文): 安本信哉・古賀大滋・田中寿幸・近藤昌和・高橋幸則 53
- 種苗生産されたヒラメにおける粘液胞子虫ナナホシクドア *Kudoa septempunctata* の感染動態 (英文): 横山 博・呂 明媚・森 広一郎・佐藤 純・米加田 徹・良永知義 60
- 養殖カワハギ *Stephanolepis cirrhifer* に発生した非結核性抗酸菌症 (英文): 深野華子・和田新平・倉田 修・水野かおり・中永和枝・星野仁彦 68
- Streptococcus parauberis* serotype I における亜血清型の存在 (英文): 金井欣也・塗 伝灯・片山直紀・菅 向志郎 75

短 報

- 庄内川の天然アユおよびその他数種の魚類におけるイカリムシ *Lernaea cyprinacea* の寄生状況: 好峯 侑・一色 正・間野静雄・K. L. Tun・良永知義 81

情 報

- 蒸留水および紫外線の *Candidatus Xenohaliotis californiensis* に対する殺菌効果: 西岡豊弘・釜石 隆・内村裕之・池上直也・桐生郁也・湯浅 啓・嶋原佳子・乙竹 充・大迫典久 85

- 文献抄録 89
会 報 91

Research Articles

- Isolation of *Lactococcus garvieae* Showing No Agglutination with Anti-KG⁺ Phenotype Rabbit Serum: D. Oinaka・N. Yoshimura・Y. Fukuda・A. Yamashita・S. Urasaki・Y. Wada・T. Yoshida 37
- Infection Kinetics of *Tenacibaculum maritimum* on the Abraded Skin of Japanese Flounder *Paralichthys olivaceus*: T. Rahman・K. Suga・K. Kanai・Y. Sugihara 44
- Histopathological and Immunohistochemical Studies of Gonadal Undifferentiated Carcinoma in Common Carp *Cyprinus carpio*: S. Yasumoto・D. Koga・K. Tanaka・M. Kondo・Y. Takahashi 53
- Infection Dynamics of *Kudoa septempunctata* (Myxozoa: Multivalvulida) in Hatchery-produced Olive Flounder *Paralichthys olivaceus*: H. Yokoyama・M. Lu・K. Mori・J. Satoh・T. Mekata・T. Yoshinaga 60
- Nontuberculous Mycobacteriosis in Farmed Thread-sail Filefish *Stephanolepis cirrhifer*: H. Fukano・S. Wada・O. Kurata・K. Mizuno・K. Nakanaga・Y. Hoshino 68
- Existence of Subserotypes in *Streptococcus parauberis* Serotype I: K. Kanai・C. Tu・N. Katayama・K. Suga 75

Short Communication

- Occurrence of *Lernaea cyprinacea* (Copepoda) in Wild Ayu *Plecoglossus altivelis* and Several Other Fishes in the Shonai River, Japan*: Y. Yoshimine・T. Isshiki・S. Aino・K. L. Tun・T. Yoshinaga 81

(*In Japanese with English summary)

Fisheries

Vol. 40 • No. 8 • August 2015

COLUMNS

GUEST COLUMN

- 344 **Raising the Bar: Taking a More Strategic and Integrated Approach to AFS Communications**
Gwen White

POLICY

- 345 **Wetlands Thrive on Connectivity**
Thomas E. Bigford

MEMBER VOICE

- 346 **Value Added by Being a Member of a Professional Society**
Sean Lucey

AFS NEWS

- 348 **The Sordid Trail of an AFS Response to *New York Times* Op-ed Piece**
Douglas Austen
- 349 **AFS Responds to an Op-ed in the *New York Times* on Trout Fishing in the Northeast US**
- 353 **What Not to Miss at the Annual Meeting (including the Most Unique Symposium): 5 Questions with Program Co-Chairs**
Jim Bowker and Nancy Leonard
- 366 **Recognition of the American Fisheries Society Professional Certification Program**
- 359 **NOAA Fisheries At-Sea Volunteer Opportunities: Hands-On, Hard Work, and a Great Experience**
Shelley Dawicki
- 360 **My Adventure Volunteering on NOAA Ships**
Joseph Kunkel
- 361 **A Voyage that Changed the Way I Thought about Life at Sea**
Carol Glor

- 404 **Membership Testimonials**

- 406 **Meet the AFS Staff**

INTERVIEW

- 354 **Q&A: The Success Story of the Oregon Chub: An Interview with Paul Scheerer**
Bob Hughes

COOL FISH

- 356 **Adventures of an Urban Angler**
Christopher Moore

JOURNAL REVIEWS

- 351 **Fisheries Classics: Ryder's Morphoedaphic Index**
Jeff Schaeffer
- 351 **Identifying Endocrine Disruptors as an Emerging Issue: Smallmouth Bass in the Potomac River**
Jeff Schaeffer
- 351 **Avoiding Domestication of an Endangered Species: Conservation Culture of California's Delta Smelt**
Jeff Schaeffer
- 352 **Oil Spill Impacts to Red Snapper in the Gulf**
Sarah Harrison
- 352 **Economic Impact and Value Data Can Be Used to Assess Policy Changes**
Sarah Harrison

Fisheries

American Fisheries Society • www.fisheries.org

EDITORIAL / SUBSCRIPTION / CIRCULATION OFFICES
5410 Grosvenor Lane, Suite 110 • Bethesda, MD 20814-2199
(301) 897-8616 • fax (301) 897-8096 • main@fisheries.org

The American Fisheries Society (AFS), founded in 1870, is the oldest and largest professional society representing fisheries scientists. The AFS promotes scientific research and enlightened management of aquatic resources for optimum use and enjoyment by the public. It also encourages comprehensive education of fisheries scientists and continuing on-the-job training.

AFS OFFICERS

PRESIDENT

Donna L. Parrish

PRESIDENT-ELECT

Ron Eissig

FIRST VICE PRESIDENT

Joe Margraf

SECOND VICE PRESIDENT

Steve L. McMullin

PAST PRESIDENT

Bob Hughes

EXECUTIVE DIRECTOR

Doug Austen

FISHERIES STAFF

SENIOR EDITOR

Doug Austen

DIRECTOR OF PUBLICATIONS

Aaron Lerner

MANAGING EDITOR

Sarah Fox

EDITOR

Sarah Harrison

CONTRIBUTING EDITOR

Beth Beard

CONTRIBUTING WRITER

Natalie Sopinka

EDITORS

CHIEF SCIENCE EDITORS

Jeff Schaeffer

Olaf P. Jensen

SCIENCE EDITORS

Kristen Anstead

Marilyn "Guppy" Blair

Jim Bowker

Mason Bryant

Steven R. Chipps

Ken Currens

Andy Danylchuk

Michael R. Donaldson

Andrew H. Fayram

Stephen Fried

Larry M. Gigliotti

Madeleine Hall-Arbor

Alf Haukenes

Jeffrey E. Hill

Deirdre M. Kimball

Jeff Koch

Jim Long

Daniel McGarvey

Jeremy Pritt

Roar Sandodden

Jesse Trushenski

Usha Varanasi

Jeffrey Williams

BOOK REVIEW EDITOR

Francis Juanes

ABSTRACT TRANSLATION

Pablo del Monte-Luna

ARCHIVE EDITOR

Mohammed Hossain

COOL SCHOOLS

- 363 The University of Southern Mississippi–Gulf Coast Research Laboratory: Interview with Jim Franks
Sarah Harrison

STUDENT ANGLES

- 367 From Landlocked to Longlining: A Summer with Sharks Puts Stress into Perspective
Claire E. Robinson
- 369 Exploring the Wonders of the Arctic from a Lab Bench
Marci Trana

ESSAYS AND FEATURES

- 370 Fishing Down through the Food Web
Villy Christensen
- 373 Fishing Impacts on Food Webs: Multiple Working Hypotheses
Trevor A. Branch
- 376 Are We Catching What They Eat? Moving Beyond Trends in the Mean Trophic Level of Catch
Konstantine J. Rountos, Michael G. Frisk, and Ellen K. Pikitch
- 386 Characterizing the Human Dimensions of a Hidden Fishery: Riverine Trotline Fishers
Benjamin D. Dickinson, Donald J. Orth, and Steve L. McMullin
- 395 Translating Climate Change Effects into Everyday Language: An Example of More Driving and Less Angling
Jefferson T. DeWeber and Tyler Wagner
- 399 Finding the Path to a Successful Graduate and Research Career: Advice for Early Career Researchers
Bryan M. Maitland, Steven J. Cooke, and Mark Poesch

2014 ANNUAL REPORT

NEW MEMBERS

JOURNAL HIGHLIGHTS

- 427 Journal of Aquatic Animal Health
Volume 27, Number 2, June 2015

CALENDAR

BACK PAGE

- 428 Try This! "Tweeting the Meeting"
Natalie Sopinka

Contents

| VOL. 35 NO.3 | FISHING CHIMES | JUNE 2015 |

Tributes to Shri Dixitulu	5	“Collective” approach to Fisherwomen Empowerment <i>-Mr.Arjili Das</i>	40
CIBA celebrates its Foundation Day - 'Open Day' set up for creating awareness among school children	25	Past, present and future of stakeholders in marine fisheries and mariculture: the role and support extended by CMFRI <i>-Gopalakrishnan A.</i>	45
INTERVIEW with Dr.Manmohan Singh, Principal Secretary, Fisheries, Department of Agriculture, Animal Husbandry and Dairying and Fisheries, Andhra Pradesh	30	Argulus and its control in aquaculture: A pesticides and nanoparticles based approach <i>- Sudip Kumar sen, Biplab Sarkar, Partha Bandyopadhyay</i>	55
INTERVIEW: KEMIN enters shrimp healthcare segment	34	Upcoming Training Programmes and Events	60
VICTAM, the feed processing expo celebrates 50 years in Cologne, Germany	37		

production

- 24 **Vibrio Control In Shrimp Farming – Part II. Farms**
Stephen G. Newman, Ph.D.
- 26 **Genetic Variation For Resistance To WSS, AHPND In Pacific White Shrimp**
Héctor Castillo-Juárez, Ph.D.; Hugo H. Montaldo, Ph.D.; Sonia Soto-Rodríguez, Ph.D.; Leobardo Montoya-Rodríguez; Juan Carlos Quintana Casares
- 28 **Sustainable Aquaculture Practices**
Calcium, Magnesium Use In Aquaculture
Claude E. Boyd, Ph.D.
- 31 **Aquaculture Engineering**
Estimating Biofilter Size For RAS Systems
Thomas M. Losordo, Ph.D.; Dennis P. DeLong, MSM
- 34 **The Bottom Line**
Integrating Feed Manufacturing Into Fish Or Shrimp Production Operations
Thomas R. Zeigler, Ph.D.; Matthew P. Zeigler, M.S.; Sidinei Valle
- 38 **Feed Tray Management Lowers FCRs, Shrimp Production Costs In Australia**
Bambang M. Julianto, Darrel Herbst
- 42 **Soy-Fed Fish News**
Soy Protein Concentrate Replaces Fishmeal In Spotted Rose Snapper Diets
Herbert E. Quintero, Ph.D.; Michael C. Cremer, Ph.D.; Jairo Amezcuita; Francisco De la Torre, DVM; Thiago Soligo
- 44 **Aquaculture In Canada: Status, Perspectives**
Thierry Chopin, Ph.D.
- 47 **Shrimp Farming In China – What Should We Learn From Its Developmental History?**
Dr. Xianhong Meng, Dr. Qingyin Wang; Dr. Jie Kong, Dr. Jian Li, Dr. Jie Huang
- 50 **Large-Scale Tilapia Project Driving Aquaculture Development In Ivory Coast**
Jérôme Lazard, Ph.D.; Habib Coulibaly
- 54 **Pirarucu Culture In The Brazilian Amazon – Fledgling Industry Faces Technological Issues**
Adriana Ferreira Lima, Ana Paula Oeda Rodrigues, Eduardo Sousa Varela, Lucas Simon Torati, Patricia Oliveira Maciel

marketplace

- 58 **Economic Impacts Of Aquatic Parasites On Global Finfish Production – Initial Estimates Project Annual Losses Up To U.S. \$9.6 Billion**
Andy Shinn, Ph.D.; Jarunan Pratoomyot, Ph.D.; James Bron, Ph.D.; Giuseppe Paladini, Ph.D.; Esther Brooker; Adam Brooker, Ph.D.
- 62 **Adding Flavor Complexity To Farmed Barramundi – Dietary Compounds Carry Traits To Fillets**
Guy Carton, Ph.D.; Igor Pirozzi, Ph.D.; Ben Jones, Ph.D.; Richard Smullen, Ph.D.
- 66 **Seafood And Health**
Warning: Shrimp Salad May Contain Shrimp – Seafood Industry Measures Build On Labeling To Minimize Allergy Issues
Roy D. Palmer, FAICD
- 68 **Food Safety And Technology**
Human Enteric Viruses In Shellfish – Part III. Norovirus Prevalence In Europe
George J. Flick, Jr., Ph.D.; David D. Kubn, Ph.D.

DEPARTMENTS

From The President	2
From The Editor	3
GAA Activities	5
Industry News	92
GAA Calendar	94
Advocate Advertisers	96

- 72 **U.S. Seafood Market**
Paul Brown, Jr.; Janice Schreiber; Angel Rubio

innovation

- 76 **Sturgeon Aquaculture In British Columbia, Canada – Are We There Yet?**
Myron Roth, Ph.D., P.Ag.; Bill Pennell, Ph.D.
- 79 **Brazil Study Results Encouraging For Injector Aerator In Super-Intensive Shrimp Culture**
Dariano Krummenauer, Ph.D.; Bob Advent; Carlos Gaona, Ph.D.; Geraldo Foes, Ph.D.; Aline Bezerra, M.S.; Alessandro Cardozo, Ph.D.; Luis Poersch, Ph.D.; Wilson Wasielesky, Jr., Ph.D.
- 82 **Land-Based Macroalgae Farming – Quantity, Quality From Sustainable Food Source**
Bradley A. Gadberry; John Colt, Ph.D.; Desmond J. Maynard; Ronald B. Johnson; Diane C. Boratyn
- 85 **USSEC, Partners Establish Asian Aquaculture Feed Formulation Database**
Dominique P. Bureau, Ph.D.; J. Owen Skipper-Horton; Timothy Moore; Lukas Manomaitis
- 88 **Insect Meals: Novel Protein, Fat Sources**
Florentino Torres
- 90 **Turbot Growth Performance On Soy-Based Feeds**
Hsiang Pin Lan; Zhang Jian; Tim O'Keefe; Michael Cremer, Ph.D.; Zhang Xiuli; Sun Xueli; Niu Zhibin; Lu Jianguo

Contents

Review:

- The forest for the trees: evaluating molecular phylogenies with an emphasis on higher-level Decapoda
LAURA TIMM AND HEATHER D. BRACKEN-GRISOM 577

Ecology:

- Variation in the size and composition of ejaculates produced by male American lobsters, *Homarus americanus* H. Milne Edwards, 1837 (Decapoda: Nephropidae)
TRACY L. PUGH, MICHEL COMEAU, KADRA BENHALIMA, AND WINSOR H. WATSON III 593
- Occurrence of *Orthione griffenis* markham, 2004 (Isopoda: Bopyridae), parasite of the mud shrimp *Upogebia major* (de Haan, 1841) in South Korean waters, and its implications with respect to marine bioinvasion
JAE-SANG HONG, CHAE-LIN LEE, AND GI-SIK MIN 605
- Does loss of salt marsh vegetation caused by a native grapsid crab improve habitat suitability for the Atlantic mud fiddler (*Uca pugnax*)?
STEPHEN M. SMITH 616

Larvae and Development:

- Studies on lipid content and composition in banded coral shrimp (*Stenopus hispidus*) embryos
LI-HSUEH WANG, CHIAHSIN LIN, CHI-YANG HUANG, AND SUJUNE TSAI 622

Palaeobiology:

- New pygocephalomorph (Peracarida) from the Permian of the Sosio Valley (Sicily, Italy)
WADE T. JONES, RODNEY M. FELDMANN, CARRIE E. SCHWEITZER, AGATINO REITANO, AND GIANNI INSACCO 627
- Faunal turnover and niche stability in marine Decapoda in the Phanerozoic
CARRIE E. SCHWEITZER AND RODNEY M. FELDMANN 633

Physiology:

- Adaptation of the brine shrimp *Artemia salina* (Branchiopoda: Anostraca) to filter-feeding: effects of body size and temperature on filtration and respiration rates
HANS ULRIK RIISGÅRD, DAVID ZALACÁIN, NATHANAËL JEUNE, JAN BRANDT WIERSMA, FLORIAN LÜSKOW, AND DANIEL PLEISSNER 650
- Purification and molecular cloning of hemocyanin from *Fenneropenaeus merguensis* (de Man, 1888): response to *Vibrio harveyi* exposure
ACHAREE JIEWKOK, BRIAN TSUKIMURA, AND PRAPAPORN UTARABHAND 659
- An anti-lipopolysaccharide factor in *Litopenaeus vannamei* participates in the immune defense against WSSV and *Vibrio anguillarum*
WENBIN ZHAN, LIANGYIN HE, XIUMEI WEI, XIAOLU WANG, AND XIAOQIAN TANG 670
- Nutritional vulnerability in early stages of the freshwater ornamental "red cherry shrimp" *Neocaridina davidi* (Bouvier, 1904) (Caridea: Atyidae)
JOÃO ALBERTO FARINELLI PANTALEÃO, SAMARA DE P. BARROS-ALVES, CAROLINA TROPEA, DOUGLAS F. R. ALVES, MARIA LUCIA NEGREIROS-FRANZOZO, AND LAURA S. LÓPEZ-GRECO 676
- Tolerance of increasing water salinity in the red swamp crayfish *Procambarus clarkii* (Girard, 1852)
ALESSANDRA MARIA BISSATTINI, LORENZO TRAVERSETTI, GABRIELLA BELLAVIA, AND MASSIMILIANO SCALICI 682

Systematics, Biogeography, and Phylogeny:

- A conceptual model for anostracan biogeography
D. CHRISTOPHER ROGERS 686
- Camachobathynella meghalayaensis* n. gen., n. sp., the first Palearctic element of Bathynellacea (Eumalacostraca: Bathynellidae) from northeastern India
YENUMULA RANGA REDDY, SHABUDDIN SHAIK, AND VENKATESWARA RAO TOTAKURA 700

Taxonomy:

- Three new species of the deep-sea genus *Collettea* Lang, 1973 (Tanaidacea: Colletteidae) in the eastern central Pacific
JIN HEE WI, HAE LIP SUH, AND DONGSUNG KIM 714

REVIEW PAPER

- Avisé, J. C. and Tatarenkov, A., Population genetics and evolution of the mangrove rivulus *Kryptolebias marmoratus*, the world's only self-fertilizing hermaphroditic vertebrate 519

REGULAR PAPERS

- Sreetharan, S., Thome, C., Mitz, C., Eme, J., Mueller, C. A., Hulley, E. N., Manzon, R. G., Somers, C. M., Boreham, D. R. and Wilson, J. Y., Embryonic development of lake whitefish *Coregonus clupeaformis*: a staging series, analysis of growth and effects of fixation 539
- Carvalho, D. R., Castro, D., Callisto, M., Moreira, M. Z. and Pompeu, P. S., Isotopic variation in five species of stream fishes under the influence of different land uses 559
- Casaretto, L., Picciulin, M. and Hawkins, A. D., Seasonal patterns and individual differences in the calls of male haddock *Melanogrammus aeglefinus* 579
- Leiser, J. K., Gagliardi-Seeley, J. L., Wisenden, B. D. and Itzkowitz, M., Mating patterns of female Leon Springs pupfish *Cyprinodon bovinus* 604
- Nishio, M., Kawamoto, T., Kawakami, R., Edo, K. and Yamazaki, Y., Life history and reproductive ecology of the endangered Itasenpara bitterling *Acheilognathus longipinnis* (Cyprinidae) in the Himi region, central Japan 616
- Coluccia, E., Deidda, F., Cannas, R., Lobina, C., Cuccu, D., Deiana, A. M. and Salvadori, S., Comparative cytogenetics of six Indo-Pacific moray eels (Anguilliformes: Muraenidae) by chromosomal banding and fluorescence *in situ* hybridization 634
- Mille, T., Mahe, K., Villanueva, M. C., De Pontual, H. and Ernande, B., Sagittal otolith morphogenesis asymmetry in marine fishes 646
- Matta, M. E., Reproductive biology of the Alaska skate *Bathyraja parmifera*, with comments on an intersexual individual 664
- Correia, M., Caldwell, I. R., Koldewey, H. J., Andrade, J. P. and Palma, J., Seahorse (Hippocampinae) population fluctuations in the Ria Formosa Lagoon, south Portugal 679
- Bower, L. M. and Piller, K. R., Shaping up: a geometric morphometric approach to assemblage ecomorphology 691
- Gaither, M. R., Bernal, M. A., Fernandez-Silva, I., Mwale, M., Jones, S. A., Rocha, C. and Rocha, L. A., Two deep evolutionary lineages in the circumtropical glass eel *Heteropriacanthus cruentatus* (Teleostei, Priacanthidae) with admixture in the south-western Indian Ocean 715
- Rochowski, B. E. A., Walker, T. I. and Day, R. W., Geographical variability in life-history traits of a midslope dogfish: the brier shark *Deania calcea* 728

Continued on inside back cover

Continued from outside back cover

BRIEF COMMUNICATIONS

Herrera, M., Saenz-Agudelo, P., Nanninga, G. B. and Berumen, M. L., Development of polymorphic microsatellite loci for conservation genetic studies of the coral reef fish <i>Centropyge bicolor</i>	748
Reis, K. V., Venere, P. C., Sampaio, I., Rêgo, P. S., Vallinoto, M. and Souza, I. L., Downstairs gene flow: the effects of a linear sequence of waterfalls on the only population of the endangered minnow <i>Astyanax xavante</i>	754
Chen, Z., Devlin, R. H. and Farrell, A. P., Upper thermal tolerance of wild-type, domesticated and growth hormone-transgenic coho salmon <i>Oncorhynchus kisutch</i>	763
Battaglia, P., Malara, D., Ammendolia, G., Romeo, T. and Andaloro, F., Relationships between otolith size and fish length in some mesopelagic teleosts (Myctophidae, Paralepididae, Phosichthyidae and Stomiidae)	774
Deli Antoni, M. Y., González-Castro, M. and Díaz de Astarloa, J. M., New tools (DNA barcoding), old hypothesis: the case of the taxonomic identity of the Argentine hakes (Actinopterygii: <i>Merluccius</i>)	783
Corrigan, S., Kacev, D. and Werry, J., A case of genetic polyandry in the shortfin mako <i>Isurus oxyrinchus</i>	794
Stańczak, K., Krejszeff, S., Dębowska, M., Mierzejewska, K., Woźniak, M. and Hliwa, P., Mass marking of <i>Leuciscus idus</i> larvae using <i>Artemia salina</i> as a vector of fluorescent dyes	799
Fogelson, S. B., Yanong, R. P. E., Kane, A., Teal, C. N., Berzins, I. K., Smith, S. A., Brown, C. and Camus, A., Gross, histological and ultrastructural morphology of the aglomerular kidney in the lined seahorse <i>Hippocampus erectus</i>	805

Journal of Fish Diseases

Volume 38, Number 10, October 2015

Contents

Original Articles

- 859 Walleye *Sander vitreus* (Mitchill) are relatively resistant to experimental infection with VHSV IVb and extant walleye strains vary in susceptibility
J Grice, A Reid, A Peterson, K Blackburn, L Tubbs, S Lord, P Huber, R Horricks, B Dixon, N C Bols and J S Lumsden
- 873 Development of simple, rapid and sensitive detection assay for grouper nervous necrosis virus using real-time loop-mediated isothermal amplification
T Mekata, J Satoh, M Inada, S Dinesh, P Harsha, T Itami and R Sudhakaran
- 881 Identification and characterization of a late gene encoded by grouper iridovirus 2L (GIV-2L)
H-Y Lin, C-F Cheng, P-P Chiou, C-J Liou, J-C Yiu and Y-S Lai
- 891 Construction of *Aeromonas salmonicida* subsp. *achromogenes* AsaP1-toxoid strains and study of their ability to induce immunity in Arctic char, *Salvelinus alpinus* L.
J M Schwenteit, B Weber, D L Milton, U T Bornscheuer and B K Gudmundsdottir
- 901 Phenotypic characterization and genetic diversity of *Flavobacterium columnare* isolated from red tilapia, *Oreochromis* sp., in Thailand
H T Dong, B LaFrentz, N Pirarat and C Rodkhum
- 915 Identification of a novel cyprinid herpesvirus 3 genotype detected in koi from the East Asian and South-East Asian Regions
J Chen, D Chee, Y Wang, G Y Lim, S M Chong, Y N Lin and T Huangfu

Short Communications

- 925 Invasion of melanoma to angioliopoma in a male Siamese fighting fish, *Betta splendens*, Regan
H Rahmati-bolasoo, M Alishahi, S Shokrpoor, A Jangarannejad and B Mohammadian
- 931 An epizootic of chilodonelliasis in farmed barramundi *Lates calcarifer* (Bloch), a case report
R O Bowater and P J O'Donoghue

JOURNAL OF MARINE RESEARCH

Volume 73, Issue 1-2 • January & March 2015

Sears Foundation for Marine Research • Yale University

CONTENTS

- 1 Species diversity patterns of marine plankton and benthos in Chinese bays: Baseline prior to large-scale development
by Weiwei Yu, Bin Chen, Paolo F. Ricci, Luoping Zhang, Jianguo Du and Zhiyuan Ma
- 17 Distinguishing turbulent overturns in high-sampling-rate moored thermistor string observations
by Hans van Haren and Louis Gostiaux
- 33 A composite vertical current spectrum for strongly and weakly stratified seas and oceans
by Hans van Haren

CONTENTS

<i>Isabelle Tremblay, Myriam Samson-Dô and Helga E. Guderley</i> When behavior and mechanics meet: scallop swimming capacities and their hinge ligament	203
<i>Jichen Liu, Xueying Sun, Ming Li, Congyao Zhang, Shuqing Cao and Yuxin Ma</i> Vibrio infections associated with yesso scallop (<i>Patinopecten yessoensis</i>) larval culture	213
<i>Kelsey M. Kuykendall, Paula Moreno, Eric N. Powell, Thomas M. Soniat, Susan Colley, Roger Mann and Daphne M. Munroe</i> The exposed surface area to volume ratio: is shell more efficient than limestone in promoting oyster recruitment?	217
<i>Stephen R. Durham and Gregory P. Dietl</i> Perspectives on geohistorical data among oyster restoration professionals in the United States	227
<i>Seth J. Theuerkauf, Russell P. Burke and Romuald N. Lipcius</i> Settlement, growth, and survival of eastern oysters on alternative reef substrates	241
<i>Stephanie K. Garvis, Paul E. Sacks and Linda J. Walters</i> Formation, movement, and restoration of dead intertidal oyster reefs in Canaveral National Seashore and Mosquito Lagoon, Florida	251
<i>Catharine Pritchard, Alan Shanks, Rose Rintler, Mark Oates and Steven Rumrill</i> The Olympia oyster <i>Ostrea lurida</i> : recent advances in natural history, ecology, and restoration	259
<i>Brady Blake and Philine S. E. Zu Ermgassen</i> The history and decline of <i>Ostrea lurida</i> in Willapa Bay, Washington	273
<i>Marc H. Hanke, James M. Hargrove, Troy D. Alphin and Martin H. Posey</i> Oyster utilization and host variation of the oyster pea crab (<i>Zaops ostreum</i>)	281
<i>Patricia Mirella Da Silva, Marcos Paiva Scardua, Caire Barreto Vieira, Analee Cruz Alves and Christopher F. Dungan</i> Survey of pathologies in <i>Crassostrea gasar</i> (Adanson, 1757) oysters from cultured and wild populations in the São Francisco estuary, Sergipe, Northeast Brazil	289
<i>Inke Sumila and Timothy Visel</i> An epizootic of <i>Haplosporidium nelsoni</i> in the eastern oysters <i>Crassostrea virginica</i> collected from the Connecticut coastline in 1986 and 1987: An examination of archived slides	297
<i>Weijun Wang, Jianmin Yang, Qi Li, Renping Ji, Xianghong Gong and Lian Li</i> Development of calibration models for rapid determination of chemical composition of Pacific oyster (<i>Crassostrea gigas</i>) by near infrared reflectance spectroscopy	303
<i>Delin Xu, Bo Yu, Yan Zhang, Miao Cui and Qizhong Zhang</i> Metallothionein protein expression of <i>Crassostrea hongkongensis</i> in response to cadmium stress	311
<i>Chin-Long Ky, Jonathan Demmer, Manarai Sham-Koua and Philippe Cabral</i> Development of cultured pearl circles and shape after initial graft and second nucleus insertion in the black-lipped pearl oyster <i>Pinctada margaritifera</i>	319
<i>Thane A. Militz, Jeff Kinch and Paul C. Southgate</i> Population demographics of <i>Tridacna nae</i> (Röding, 1798) in New Ireland, Papua New Guinea	329
<i>Pinar Genç, Umur Önal and Mehmet R. Gezen</i> Comparison of gametogenic cycles of the endemic European carpet shell clam (<i>Ruditapes decussatus</i>) and the introduced Manila clam (<i>Ruditapes philippinarum</i>) from a temperate coastal Mediterranean lagoon in the Dardanelles, Turkey	337
<i>Serhat Çolakoğlu and Mustafa Palaz</i> Population structure and dynamics of warty venus, <i>Venus verrucosa</i> (Bivalvia, veneridae), in North Aegean Sea, Turkey	347
<i>John S. Hargrove, Leslie Sturmer, John Scarpa and James D. Austin</i> Assessment of genetic diversity in wild and aquaculture stocks of <i>Mercenaria mercenaria</i> in Florida	355
<i>Estefanía Orellana and Karin B. Lohrmann</i> Histopathological assessment of broodstock of the razor clam <i>Ensis macha</i> (Pharidae) from the Tongoy Bay, Chile	367
<i>Anja Landes, Per Dolmer, Louise K. Poulsen, Jens Kjerulf Petersen and Bent Vismann</i> Growth and respiration in blue mussels (<i>Mytilus</i> spp.) from different salinity regimes	373
<i>George C. Protopopescu and Brian F. Beal</i> Settlement response to various rope substrates in blue mussels (<i>Mytilus edulis</i> linnaeus) in a hatchery setting	383
<i>Lisha Li, Weiqun Lu, Yanming Sui, Youji Wang, Yasmeen Gul and Sam Dupont</i> Conflicting effects of predator cue and ocean acidification on the mussel <i>Mytilus coruscus</i> byssus production	393
<i>Marco A. Angel-Dapa, Marcial Arellano-Martínez, Bertha P. Ceballos-Vázquez, Miguel Robles-Mungaray, Eloisa Robles-Rocha, Marian A. Camacho-Mondragón and Pedro E. Saucedo</i> Reproductive and larval performance of the pen shell <i>Atrina maura</i> in relation to the origin and condition of broodstock	401

CONTENTS CONTINUED ON INSIDE BACK COVER

John A. Theodorou, Ross James, Ioannis Tzovenis and Claire Hellio	
The recruitment of the endangered fan mussel <i>Pinna nobilis</i> (Linnaeus, 1758) on the ropes of a Mediterranean mussel long line farm	409
Blake W. Sauey, Jon J. Amberg, Scott T. Cooper, Sandra K. Grunwald, Teresa J. Newton and Roger J. Haro	
Preliminary characterization of digestive enzymes in freshwater mussels	415
Antoine Le Guernic, Christophe Felix, Aurélie Bigot, Elise David, Odile Dedourge-Geffard, Alain Geffard and Stéphane Betoulle	
Food deprivation and modulation of hemocyte activity in the zebra mussel (<i>Dreissena polymorpha</i>)	423
Guillaume Juhel, Ruth M. Ramsay, John Davenport, John O'Halloran and Sarah C. Culloty	
Effect of the microcystin-producing cyanobacterium, <i>Microcystis aeruginosa</i> , on immune functions of the zebra mussel <i>Dreissena polymorpha</i>	433
Ajit Kumar Ngangbam, Daniel L. E. Waters, Steve Whalan, Abdul Baten and Kirsten Benkendorff	
Indole-producing bacteria from the biosynthetic organs of a muricid mollusc could contribute to tyrian purple production	443
Norman L. C. Ragg and Ellie Watts	
Physiological indicators of stress and morbidity in commercially handled abalone <i>Haliotis iris</i>	455
Hedayat Yavarmoghadam, Hossein Zolgharnein, Mohamad A. Salari Aliabadi, Saeed Keyvanshokoo and Mohamad Modarresi	
Genetic analysis of cuttlefish <i>Sepia pharaonis</i> (Ehrenberg, 1831) populations in Persian Gulf with microsatellite markers	469
Maria Del Mar Celdrán Sancho, Jesús Cerezo Valverde, José Sáez Sironi and Benjamín García García	
Is copper supplementation required in formulated feeds for <i>Octopus vulgaris</i> (Cuvier, 1797)?	473
Miguel Ángel Gamboa-Alvarez, Jorge Alberto López-Rocha and Gaspar Román Poot-López	
Spatial analysis of the abundance and catchability of the red octopus <i>Octopus maya</i> (Voss and Solís-Ramírez, 1966) on the continental shelf of the Yucatan Peninsula, Mexico	481
Katherine M. Swiney and W. Christopher Long	
Primiparous red king crab <i>Paralithodes camtschaticus</i> are less fecund than multiparous crab	493
Takeo Yamamoto, Tatsuya Yamada, Hiroshi Fujimoto and Katsuyuki Hamasaki	
Effects of salinity on snow crab (<i>Chionoecetes opilio</i>) larval survival and development under laboratory conditions	499
Sarah R. Cunningham and M. Zachary Darnell	
Temperature-dependent growth and molting in early juvenile blue crabs <i>Callinectes sapidus</i>	505
Amanda L. Smith and Andrew F. Rowley	
Effects of experimental infection of juvenile edible crabs <i>cancer pagurus</i> with the parasitic dinoflagellate <i>Hematodinium</i> sp.	511
Cláudia Filipa Devesa André Moreira, António Paulo Alves Ferreira De Carvalho and Joana Costa Vilhena De Bessa Campos	
Comparing the response of the brown shrimp <i>crangon crangon</i> (Linnaeus, 1758) to prolonged deprivation of food in two seasons	521
Kisei Tanaka and Yong Chen	
Spatiotemporal variability of suitable habitat for American lobster (<i>Homarus americanus</i>) in Long Island Sound	531
Mélanie Chiasson, Gilles Miron, Donnia Daoud and Martin D. Mallet	
Effect of temperature on the behavior of stage IV American lobster (<i>Homarus americanus</i>) larvae	545
Sylvain Couvray, Thomas Miard, Robert Bunet, Yvan Martin, Joel-Paul Grillasca, Jean-Luc Bonnefont and Stéphane Coupé	
Experimental release of juvenile sea urchins (<i>Paracentrotus lividus</i>) in exploited sites along the French Mediterranean coast	555
Rebecca A. Mabardy, George G. Waldbusser, Flaxen Conway and Christine S. Olsen	
Perception and response of the U.S. west coast shellfish industry to ocean acidification: The voice of the canaries in the coal mine	565
Daria Sebastiano, Jeffrey S. Levinton, Michael Doall and Shauna Kamath	
Using a shellfish harvest strategy to extract high nitrogen inputs in urban and suburban coastal bays: Practical and economic implications	573
Abstracts of technical papers, presented at the 107 th Annual Meeting, National Shellfisheries Association, Monterey, California, March 22–26, 2015	585
Abstracts of shellfish technical papers, presented at the joint meeting of the Northeast Aquaculture Conference and Exposition and the 35 th Milford Aquaculture Seminar, Portland, Maine, January 14–16, 2015	695

COVER PHOTO: Giant clam *Tridacna noae* observed within the Kavieng lagoonal system, New Ireland, Papua New Guinea. Photo: Thane A. Miliutz.

JOURNAL OF THE WORLD AQUACULTURE SOCIETY

Volume 46

August 2015

No. 4

Research Articles

- Replacement of Fish Oil with Linseed Oil or Soybean Oil in Feeds for Japanese Seabass, *Lateolabrax japonicus*: Effects on Growth Performance, Immune Response, and Tissue Fatty Acid Composition.** Houguo Xu, Yanjiao Zhang, Jun Wang, Rantao Zuo, Kangsen Mai, and Qinghui Ai 349–362
- Immunomodulatory Effects of Dietary β -glucan and Vitamin C in Nile Tilapia, *Oreochromis niloticus* L., Subjected to Cold-induced Stress or Bacterial Challenge.** Margarida M. Barros, Dario R. Falcon, Ricardo O. Orsi, Luiz E. Pezzato, Ademir C. Fernandes Junior, Ary Fernandes Junior, Pedro L. P. F. de Carvalho, Carlos R. Padovani, Igo G. Guimarães, and Maria M. P. Sartori 363–380
- Dietary Intake of Purple Corn Extract Reduces Fat Body Content and Improves Antioxidant Capacity and n-3 Polyunsaturated Fatty Acid Profile in Plasma of Rainbow Trout, *Oncorhynchus mykiss*.** Alejandro Villasante, Biswamitra Patro, Boon Chew, Michael Becerra, Jurij Wacyk, Ken Overturf, Madison S. Powell, and Ronald W. Hardy 381–394
- Growth Performance, Fatty Acid Composition, Peroxisome Proliferator-activated Receptors Gene Expressions, and Antioxidant Abilities of Blunt Snout Bream, *Megalobrama amblycephala*, Fingerlings Fed Different Dietary Oil Sources.** Yang Li, Yuntong Zhao, Yongkang Zhang, Xiao Liang, Yin Zhang, and Jian Gao. 395–408
- Comparative Characterization of Enzymatic Digestion from Fish and Soybean Meal from Simulated Digestive Process of Pacific Bluefin Tuna, *Thunnus orientalis*.** Ariana I. Román-Gavilanes, Emmanuel Martínez-Montaña, and María Teresa Viana 409–420
- Cloning of the Ecdysone Receptor Gene from the Chinese Mitten Crab, *Eriocheir sinensis*, and Sexually Dimorphic Expression of Two Splice Variants.** Huaishun Shen, Yuanchao Ma, Yacheng Hu, and Xin Zhou 421–433
- Refining Inclusion Levels of Grain Distiller's Dried Yeast in Commercial-type and Plant-based Diets for Juvenile Rainbow Trout, *Oncorhynchus mykiss*.** Wendy M. Sealey, Thomas J. O'Neill, Jesse T. Peach, T. Gibson Gaylord, Frederic T. Barrows, and Stephanie S. Block. 434–444
- Evaluation of Heterotrophic Algae Meal as a Diet Ingredient for Channel Catfish, *Ictalurus punctatus*.** Zachary A. Kupchinsky, Shawn D. Coyle, Leigh A. Bright, and James H. Tidwell. . 445–452
- Sequence Variation in the Farnesoic Acid O-methyltransferase Gene and its Associations with Growth of Shrimp, *Penaeus chinensis*.** Zhaoxia Li, Jinye Wang, Yan Zhang, Chunde Wang, and Yuying He. 453–460

MARINE ECOLOGY

PROGRESS SERIES

Volume 532 · 2015

July 21

FEATURE ARTICLE

Teske PR, Sandoval-Castillo J, van Sebille E, Waters J, Beheregaray LB
On-shelf larval retention limits population connectivity in a coastal broadcast spawner

1–12

RESEARCH ARTICLES

Young JN, Kranz SA, Goldman JAL, Tortell PD, Morel FMM
Antarctic phytoplankton down-regulate their carbon-concentrating mechanisms under high CO₂ with no change in growth rates

13–28

Gledhill M, Gerringa LJA, Laan P, Timmermans KR
Heme *b* quotas are low in Southern Ocean phytoplankton

29–40

Harris JL, Lewis LS, Smith JE
Quantifying scales of spatial variability in algal turf assemblages on coral reefs

41–57

Watson EB, Wigand C, Oczkowski AJ, Sundberg K, Vendettuoli D, Jayaraman S, Saliba K, Morris JT
Ulva additions alter soil biogeochemistry and negatively impact *Spartina alterniflora* growth

59–72

Sjotun K, Husa V, Asplin L, Sandvik AD
Climatic and environmental factors influencing occurrence and distribution of macroalgae—a fjord gradient revisited

73–88

Ricart AM, Dalmau A, Pérez M, Romero J
Effects of landscape configuration on the exchange of materials in seagrass ecosystems

89–100

Olsen YS, Duarte CM
Combined effect of warming and infection by *Labyrinthula* sp. on the Mediterranean seagrass *Cymodocea nodosa*

101–109

Jahnke M, Serra IA, Bernard G, Procaccini G
The importance of genetic make-up in seagrass restoration: a case study of the seagrass *Zostera noltii*

111–122

Henderson J, Hacker SD
Buried alive: an invasive seagrass (*Zostera japonica*) changes its reproductive allocation in response to sediment disturbance

123–136

Klepac CN, Beal J, Kenkel CD, Sproles A, Polinski JM, Williams MA, Matz MV, Voss JD
Seasonal stability of coral–*Symbiodinium* associations in the subtropical coral habitat of St. Lucie Reef, Florida

137–151

Contents continued on back cover →

MARINE ECOLOGY PROGRESS SERIES

Volume 532 · 2015

Contents continued from front cover

Williams LM, Nivison CL, Ambrose WG Jr, Dobbin R, Locke WL V Lack of adult novel northern lineages of invasive green crab <i>Carcinus maenas</i> along much of the northern US Atlantic coast	153–159	Schultz AL, Malcolm HA, Linklater M, Jordan AR, Ingleton T, Smith SDA Sediment variability affects fish community structure in unconsolidated habitats of a sub-tropical marine park	213–226
Freuchet F, Tremblay R, Flores AAV Interacting environmental stressors modulate reproductive output and larval performance in a tropical intertidal barnacle	161–175	Smith JM, Fresh KL, Kagley AN, Quinn TP Ultrasonic telemetry reveals seasonal variation in depth distribution and diel vertical migrations of sub-adult Chinook and coho salmon in Puget Sound	227–242
Biton Porsmoguer S, Bănară D, Boudouresque CF, Dekeyser I, Viricel A, Merchán M DNA evidence of the consumption of short-beaked common dolphin <i>Delphinus delphis</i> by the shortfin mako shark <i>Isurus oxyrinchus</i>	177–183	Thomson JA, Gulick A, Heithaus MR Intraspecific behavioral dynamics in a green turtle <i>Chelonia mydas</i> foraging aggregation	243–256
Pearson R, Stevens T Distinct cross-shelf gradient in mesophotic reef fish assemblages in subtropical eastern Australia	185–196	Newell M, Wanless S, Harris MP, Daunt F Effects of an extreme weather event on seabird breeding success at a North Sea colony	257–268
Trebilco R, Dulvy NK, Stewart H, Salomon AK The role of habitat complexity in shaping the size structure of a temperate reef fish community	197–211	Zerbini AN, Baumgartner MF, Kennedy AS, Rone BK, Wade PR, Clapham PJ Space use patterns of the endangered North Pacific right whale <i>Eubalaena japonica</i> in the Bering Sea	269–281
		Corrigendum <i>Lisle et al., Vol. 509: 71–85 (2014)</i>	283

Molluscan Research

International Journal of the Malacological Society of Australasia
and the Society for the Study of Molluscan Diversity
Volume 35, Number 3 (August 2015)

CONTENTS

Articles

- Glacidorbidae (Gastropoda: Heterobranchia) in South America: revision and description of a new genus and three new species from Patagonia**
Alejandra Rumi, Diego Eduardo Gutiérrez Gregoric, Néstor Landoni, Javiera Cárdenas Mancilla, Sandra Gordillo, Jorge Gonzalez and Denisse Alvarez 143
- New record for *Galba neotropica* (d'Orbigny, 1835) in Argentina, with a detailed analysis of its morphology and molecular characteristics**
Julieta M. Pujadas, Marisa Farber, Jean-Pierre Pointier, Claudio Giudici, Cristina Wisnivesky and Lucila Prepelitchi 153
- Seasonal changes of progesterone and testosterone concentrations throughout gonad maturation stages of the Mexican octopus, *Octopus maya* (Octopodidae: Octopus)**
Omar Hernando Avila-Poveda, Rubén Cornelio Montes-Pérez, Noussithé Koueta, Francisco Benítez-Villalobos, Jorge Saúl Ramírez-Pérez, L.R. Jimenez-Gutierrez and Carlos Rosas 161
- Population dynamics of *Turbo militaris* (Gastropoda: Turbinidae) on rocky shores in a subtropical marine park: implications for management**
Kris Cooling and Stephen D.A. Smith 173
- Spermatozoan ultrastructure and mitochondrial gene sequence of *Caryocorbula caribaea* (d'Orbigny, 1853) (Corbulidae: Bivalvia), a species with plasticity in shell morphology**
Lenita de Freitas Tallarico, Gisele Orlandi Introini, Amanda Bonini, Flávio Dias Passos, Fabrizio Marcondes Machado, Eliane Pintor de Arruda and Shirlei Maria Recco-Pimentel 182
- Functional phenotypic plasticity of the endolithic mytilid *Leiosolenus curtus* (Lischke, 1874) (Bivalvia: Mytilidae)**
Masato Owada 188
- The living morphology and movement of the temperate Australian marine snail *Sukashitrochus pulcher* (Petterd, 1884) (Vetigastropoda: Scissurellidae)**
Platon Vafiadis and T. Joan Hales 196
- The Indo-Pacific oyster *Spondylus spinosus* Schreibers, 1793 in the Eastern Mediterranean Sea: reproductive features**
Ateret Shabtay, Gil Rilov and Yehuda Benayahu 206

- 245 Efficacy of Varying Doses of Channel Catfish Pituitary Extract on Spawning Performance of Pinfish and Pigfish
Jason S. Broach, Cortney L. Ohs, Matthew A. DiMaggio, Christopher C. Green, and D. Roger Yant
- 255 Spawning Behavior of Cultured Delta Smelt in a Conservation Hatchery
Melanie LaCava, Kathleen Fisch, Meredith Nagel, Joan C. Lindberg, Bernie May, and Amanda J. Finger
- 267 Attempts to Improve Survivorship and Condition of Pond-Reared Hybrid Striped Bass during Live Transport
Kelli Barry, John Bowzer, and Jesse T. Trushenski
- 275 [Communication] Food Transit Time and Site of Absorption of Nutrients in Gulf of Mexico Sturgeon
Jesus A. Venero, Richard D. Miles, and Frank A. Chapman
- 281 Using Model-Based Inference to Select a Predictive Growth Curve for Farmed Tilapia
Yaw B. Ansah and Emmanuel A. Frimpong
- 289 Effect of Different Stocking Densities on Growth and Production Performances of Chevron Snakehead *Channa striata* in Fiberglass Tanks
S. M. N. Amin, M. P. A. Muntaziana, M. S. Kamarudin, A. A. Rahim, and M. Aminur Rahman
- 295 Optimal Feeding Level of Burbot Larvae Fed *Artemia* spp. and Reared under Controlled Conditions
Katarzyna Palińska-Żarska, Daniel Żarski, Sławomir Krejszef, Krzysztof Kupren, Beata Łaczyńska, and Dariusz Kucharczyk
- 302 Spawning, Larviculture, and Salinity Tolerance of Alewives and Blueback Herring in Captivity
Matthew A. DiMaggio, Harvey J. Pine, Linas W. Kenter, and David L. Berlinsky
- 312 [Communication] Inheritance of Sparkling Scales (Ginrin) Trait in Ornamental Koi Carp
Boris Gomelsky, Thomas A. Delomas, Kyle J. Schneider, Ammu Anil, and Jeffrey L. Warner
- 318 Bacterial Community Analysis of Different Sections of a Biofilter in a Full-Scale Marine Recirculating Aquaculture System
Yun-Jie Ruan, Xi-Shan Guo, Zhang-Ying Ye, Ying Liu, and Song-Ming Zhu

Special Section:
HaMAR

- 327 Introduction to a Special Section: Hatcheries and Management of Aquatic Resources (HaMAR)—Considerations for Use of Hatcheries and Hatchery-Origin Fish
Jesse T. Trushenski, H. Lee Blankenship, James D. Bowker, Thomas A. Flagg, Jay A. Hesse, Kenneth M. Leber, Don D. MacKinlay, Desmond J. Maynard, Christine M. Moffitt, Vincent A. Mudrak, Kim T. Scribner, Scott F. Stuewe, John A. Sweka, Gary E. Whelan, and Connie Young-Dubovsky
- 343 Fish Hatchery Genetic Management Techniques: Integrating Theory with Implementation
Kathleen M. Fisch, Christine C. Kozfkay, Jamie A. Ivy, Oliver A. Ryder, and Robin S. Waples
- 358 Mythbusters: What's Real and What's Not When It Comes to Fish Drugs
James D. Bowker and Jesse T. Trushenski
- 367 Balancing Conservation and Harvest Objectives: a Review of Considerations for the Management of Salmon Hatcheries in the U.S. Pacific Northwest
Thomas A. Flagg
- 377 A Synthesis of Findings from an Integrated Hatchery Program after Three Generations of Spawning in the Natural Environment
David E. Fast, William J. Bosch, Mark V. Johnston, Charles R. Strom, Curtis M. Knudsen, Anthony L. Fritts, Gabriel M. Temple, Todd N. Pearsons, Donald A. Larsen, Andrew H. Dittman, and Darran May
- 396 Rehabilitation Stocking of Walleyes and Lake Trout: Restoration of Reproducing Stocks in Michigan Waters of Lake Huron
James E. Johnson, Ji X. He, and David G. Fielder
- 409 Contribution of Hatchery-Reared Walleyes to Populations in Northern Green Bay, Lake Michigan
Troy G. Zorn

STATISTICAL SCIENCE

Volume 30, Number 3

August 2015

Assessing the Potential Impact of a Nationwide Class-Based Affirmative Action System	<i>Alice Xiang and Donald B. Rubin</i>	297
On Particle Methods for Parameter Estimation in State-Space Models	<i>Nikolas Kantas, Arnaud Doucet, Sumeetpal S. Singh, Jan Maciejowski and Nicolas Chopin</i>	328
A Closer Look at Testing the “No-Treatment-Effect” Hypothesis in a Comparative Experiment.....	<i>Joseph B. Lang</i>	352
Fourth Moments and Independent Component Analysis	<i>Jari Miettinen, Sara Taskinen, Klaus Nordhausen and Hannu Oja</i>	372
The Ghosts of the École Normale	<i>Laurent Mazliak</i>	391
A Conversation with Alan Gelfand	<i>Bradley P. Carlin and Amy H. Herring</i>	413
A Conversation with Professor Tadeusz Caliński	<i>Anthony C. Atkinson and Barbara Bogacka</i>	423

TRANSACTIONS OF THE AMERICAN FISHERIES SOCIETY

VOLUME 144, NUMBER 4, July 2015

- 655 Responses of Coastal Largemouth Bass to Episodic Hypoxia
Daniel T. Brown, D. Derek Aday, and James A. Rice
- 667 Integrating Nonnative Species in Niche Models to Prioritize Native Fish Restoration Activity Locations along a Desert River Corridor
Timothy E. Walsworth and Phaedra Budy
- 682 Effect of Predator Size and Prey Characteristics on Piscivory of Juvenile Largemouth Bass
Lisa M. Einfalt, Joseph J. Parkos III, and David H. Wahl
- 693 Influence of Postcapture Ventilation Assistance on Migration Success of Adult Sockeye Salmon following Capture and Release
Kendra A. Robinson, Scott G. Hinch, Graham D. Raby, Michael R. Donaldson, Dave Robichaud, David A. Patterson, and Steven J. Cooke
- 705 Seasonal and Spatial Patterns of Fish Sound Production in the May River, South Carolina
Eric W. Montie, Steven Vega, and Michael Powell
- 717 Peritoneal Pigmentation in Purebred and Hybrid River Herring
David L. Berlinsky, Matthew A. DiMaggio, Timothy S. Breton, Jennifer Walsh, and Adrienne I. Kovach
- 724 Trophic Ontogeny of Fluvial Bull Trout and Seasonal Predation on Pacific Salmon in a Riverine Food Web
Erin D. Lowery and David A. Beauchamp
- 742 Shortnose Sturgeon in the Gulf of Maine: Use of Spawning Habitat in the Kennebec System and Response to Dam Removal
Gail S. Wippelhauser, Gayle B. Zydlewski, Micah Kieffer, James Sulikowski, and Michael T. Kinnison
- 753 Multiscale Prediction of Whirling Disease Risk in the Blackfoot River Basin, Montana: a Useful Consideration for Restoration Prioritization?
L. A. Eby, R. Pierce, M. Sparks, K. Carim, and C. Podner
- 767 Using Next-Generation Sequencing to Assist a Conservation Hatchery: a Single-Nucleotide Polymorphism Panel for the Genetic Management of Endangered Delta Smelt
Ryan M. Lew, Amanda J. Finger, Melinda R. Baerwald, Alisha Goodbla, Bernie May, and Mariah H. Meek
- 780 Diet Partitioning in a Diverse Centrarchid Assemblage in the Atchafalaya River Basin, Louisiana
Brett A. Miller, William E. Kelso, and Michael D. Kaller
- 792 Effects of Regulated River Flows on Habitat Suitability for the Robust Redhorse
J. Michael Fisk II, Thomas J. Kwak, and Ryan J. Heise
- 807 Temporal Variation in Diet Composition and Use of Pulsed Resource Subsidies by Juvenile Sablefish
K. M. Coutr , A. H. Beaudreau, and P. W. Malecha
- 820 [Note] Orientation and Position of Fish Affects Recovery Time from Electrosedation
Andrew M. Rous, Alexandra Forrest, Elisabeth Hart McKittrick, George Letterio, Jordan Roszell, Taylor Wright, and Steven J. Cooke
- 829 [Note] Migration Timing of Adult Chinook Salmon into the Togiak River, Alaska, Watershed: Is There Evidence for Stock Structure?
Sydney C. Clark, Theresa L. Tanner, Suresh A. Sethi, Kale T. Bentley, and Daniel E. Schindler
- 837 Evidence of Countergradient Variation in Growth of Spotted Gars from Core and Peripheral Populations
Solomon R. David, Richard S. Kik IV, James S. Diana, Edward S. Rutherford, and Michael J. Wiley
- 851 [Note] External Attachment of Acoustic Tags to Deepwater Reef Fishes: an Alternate Approach When Internal Implantation Affects Experimental Design
Matthew W. Johnson, Sandra L. Diamond, and Gregory W. Stunz
- 860 [Note] Deep Hooking and Postrelease Mortality of Two Australian Native Freshwater Fishes Angled from Rivers by using Natural Baits
Karina C. Hall, Matt K. Broadhurst, and Brian R. Cullis

New Additions to Library

Periodicals

1. African Journal of Marine Science: Vol. 37 (2) Jul '15
2. Agricultural Research Data Book (IASRI) 2015
3. Annual Report: Zonal Project Directorate, Zone VIII, ICAR, Bangalore: 2014-15
4. Aqua International: Vol. 23 (4) Aug '15
5. Aqua International: Vol. 23 (5) Sep '15
6. Aquaculture: Vol. 447 Oct '15
7. Aquaculture: Vol. 448 Nov '15
8. Aquaculture Extension Manual No. 44: Prevention and control Measures against viral nervous necrosis (VNN) in marine fish hatcheries
9. Aquaculture Extension Manual No. 45: Fingerling production of hatchery-reared milkfish (*Chanos chanos*) in earthen nursery ponds
10. Aquaculture Extension Manual No. 46: Intensive culture of sea bass, *Lates calcarifer* Bloch, in brackish water earthen ponds
11. Aquaculture Extension Manual No. 47: Mud crab nursery in ponds
12. Aquaculture Extension Manual No. 48: Seed production of sandfish (*Holothuria scabra*) in Vietnam
13. Aquaculture Research: Vol. 46 (10) Oct '15
14. Aquaculture Research: Vol. 46 (9) Sep '15
15. Biospectrum : Vol. 13 (8) Sep '15
16. California Fish and Game: Vol. 101 (2) Spring '15
17. California Fish and Game: Vol. 101 (3) Summer '15
18. Canadian Journal of Agricultural Economics: Vol. 63 (1) Sep '15
19. Canadian Journal of Fisheries and Aquatic Sciences: Vol. 72 (7) Jul '15
20. Current Science: Vol. 109 (5) Sep '15
21. Current Science: Vol. 109 (7) Oct '15
22. Down to Earth: Vol. 24 (10) Oct '15
23. DREAM 2047: Vol. 17 (12) Sep '15
24. DREAM 2047: Vol. 18 (1) Oct '15
25. Economic and Political Weekly: Vol. 50 (38) Sep '15

26. Economic and Political Weekly: Vol. 50 (34) Aug '15
27. Economic and Political Weekly: Vol. 50 (36) Sep '15
28. Economic and Political Weekly: Vol. 50 (37) Sep '15
29. Economic and Political Weekly: Vol. 50 (39) Sep '15
30. Economic and Political Weekly: Vol. 50 (40) Oct '15
31. FAN - FAO Aquaculture Newsletter: No. 53, Mar '15
32. Fish and Fisheries: Vol. 16 (3) Sep '15
33. Fish Pathology: Vol. 50 (2) Jun '15
34. Fisheries: Vol. 40 (8) Aug '15
35. Fishing Chimes: Vol. 35 (3) Jun '15
36. Fishing Chimes: Vol. 35 (3) Jun '15
37. Fishing News International: Vol. 54 (4) Apr '15
38. Fishing News International: Vol. 54 (5) May '15
39. Fishing News International: Vol. 54 (8) Aug '15
40. FRA News (Fisheries Research Agency News: in Japanese): Vol. 44 (9) 2015
41. Genes are Gems: Reporting Agri-Biotechnology - A sourcebook for Journalist
42. Global Aquaculture Advocate: Vol. 18 (5) Sep / Oct '15
43. Health Management in Aquaculture, 2nd Edition
44. Helgoland Marine Research: Vol. 69 (3) Sep '15
45. ICAR Award Ceremony: Citations: 2015
46. Indian Journal of Agricultural Marketing: Vol. 29 (1) Jan-Apr '15
47. Indian Journal of Experimental Biology: Vol. 53 (10) Oct '15
48. Indian Journal of Experimental Biology: Vol. 53 (9) Sep '15
49. Indian Journal of Natural Products and Resources: Vol. 6 (2) Jun '15
50. Journal of Biosciences: Vol. 40 (3) Sep '15
51. Journal of Crustacean Biology: Vol. 35 (5) Sep '15
52. Journal of Fish Biology: Vol. 87 (3) Sep '15
53. Journal of Fish Diseases: Vol. 38 (10) Oct '15
54. Journal of Indian Ocean Studies: Vol. 23 (2) Aug '15
55. Journal of Marine Biological Association of India :Vol. 57 (1) Jan-Jun '15
56. Journal of Marine Biological Association of the United Kingdom : Vol. 88 (6) Sep 2008
Special Issue
57. Journal of Marine Biological Association of the United Kingdom : Vol. 89 (3) May 2009
58. Journal of Marine Research: Vol. 73 (1-2) Jan-Mar '15

59. Journal of Shellfish Research: Vol. 34 (2) Aug '15
60. Journal of World Aquaculture Society: Vol. 46 (4) Aug '15
61. Kasetsart University Fisheries Research Bulletin: Vol. 39 (2) May - Aug '15
62. Marine Biodiversity: Vol. 45 (1) Mar '15
63. Marine Biodiversity: Vol. 45 (2) Jun '15
64. Marine Ecology Progress Series: Vol. 532 Jul '15
65. Memoria: No. 173 - 174, 2010
66. Microscopy and Analysis: No. 112 Sep-Oct '15
67. Molluscan Research: Vol. 35 (3) Aug '15
68. National Geographic: Vol. 3 (3) Oct '15
69. Nature: Vol. 525 (7567) Sep '15
70. Nature: Vol. 525 (7568) Sep '15
71. Nature: Vol. 525 (7569) Sep '15
72. Nature: Vol. 525 (7570) Sep '15
73. Nature India: Special Issue Aug '15
74. NIWA Biodiversity Memoir 128 : Marine Fauna of New Zealand- Sponges in the family Geodiidae (Demospongiae : Astrophorina)
75. North American Journal of Aquaculture: Vol. 77 (3) Jul '15
76. Ocean and Polar Research: Vol. 37 (3) Sep '15
77. Oceanic Linguistics: Vol. 54 (1) Jun '15
78. Pacific Science: Vol. 69 (2) Apr '15
79. Proceedings of the Workshop on "Mangrove - Friendly Aquaculture" Organized by the SEAFDEC, January 11-15, 1999, Philippines
80. Proceedings: Collaborative State Level Research - Industry- Farmer - Extension Interaction Workshop on Freshwater Aquaculture Development in Odisha, 27-28, June 2015
81. Recent developments in the genetic improvement of the giant freshwater prawn (*Macrobrachium* sp.)
82. Reforming Philippine Science (SEAFDEC)
83. Report of the Regional Technical Consultation on the Aquaculture of *Penaeus vannamei* and other Exotic Shrimps in Southeast Asia, Manila, Philippines, 1-2 March 2005
84. Resonance: Vol. 20 (10) Oct '15
85. Resonance: Vol. 20 (9) Sep '15
86. Statistical Science: Vol. 30 (3) Aug '15

87. Transactions of American Fisheries Society: Vol. 144 (4) Jul '15
88. Vision 2050: National Bureau of Soil Survey and Land Use Planning NBSS&LUP,
Nagpur
89. What ails our Agriculture? - The Gujarat Experience

